SARA TITLE III SECTION 313 INSPECTION REPORT
09-313U-012

APR 13 2009

I. **Facility**
Alcoa (Alumax) Mill Products
1480 Manheim Pike
Lancaster, PA 17604

SIC:
3353

II. **Date of Inspection**
February 19, 2009

III. **EPA Inspector**
Robert Staves
Environmental Protection Specialist
Office of Enforcement, Compliance, and Environmental Justice
Phone - (215)-814-2962 Fax - (215)-814-2905

IV. **Company Officials**
Brian Breisinger, Staff Environmental Engineer (717) 393-9641 x1549
Steven S. Morinchin, Environmental Technician (717) 393-9641 x1510

V. **Purpose of Inspection**

Alcoa Mill Products is a manufacturer of aluminum sheets and plates and has submitted a toxic chemical release report Form R or Form A for certain chemicals under Section 313 of SARA Title III for calendar years 2005, 2006, and 2007. This inspection was conducted to verify whether the facility fulfilled its reporting requirements under 40 C.F.R. Part 372 under Section 313 of SARA Title III for those years.

VI. **Opening Conference**

1. **Inspection Procedures and General Information**

On February 19, 2009, a Section 313 inspection was conducted at Alcoa Mill Products. Several days prior to the inspection, a letter was sent to the company confirming the date of the inspection (attachment C). The EPA inspector met with company representatives at 9:00 a.m. The inspectors' credentials were presented and a Notice of Inspection was presented and explained. Mr. Breisinger signed the notice and an outline of the areas to be investigated was discussed.

2. Facility Description

Alcoa Mills' Lancaster, PA site, located in a residential area, produces non-heat treatable aluminum sheets that are either rolled into coils and shipped to manufacturers for fabrication into a variety of products, or stamped into circles and blanks for fabrication. The company's products consist largely of aluminum for beverage cans, cars, airplanes, buildings, lighting fixtures, cookware, and tooling plate. The company has been conducting operations at this location since the 1940's.

The Lancaster, PA site currently employs approximately 680 people, most of whom being involved in research and development, production, or sales. Mr. Breisinger handles several of the facility's environmental matters at the site, including SARA Title III Section 313 reporting with the assistance of Mr. Morinchin.

The facility site plan, depicting the facility's major manufacturing equipment and activities, is included as Document 1. The facility occupies approximately 1,423,926 square feet. Site activities include casting, scalping, treating, milling, shearing, rolling, annealing, level and slitting, painting or blanking, packing, shipping, product warehousing, waste management, product research and development, and administration.

VII. SARA Title III

Section 313 was the primary focus of the inspection. A letter notifying the facility of the inspection was sent to the facility on February 5, 2009.

A plant, factory, or other facility comes under the provisions of Section 313:

1. has a primary Standard Industrial Classification ("SIC") code (as in effect on January 1, 1987) between 2000 and 3999, or, starting January 1, 1998, has a SIC code in one or more of the following categories:
    - A. between 1000 and 1099, except 1011, 1081, and 1094;
    - B. between 1200 and 1299, except 1241;
    - C. 4911, 4931, or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce);
    - D. 4953 (limited to facilities regulated under Resource Conservation and Recovery Act, subtitle C, 42 U.S.C. ' 6921 et. seq.);
    - E. 5169 or 5171;
    - F. 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis); and

2. If, in addition, it has 10 or more full-time employees; and

3. If it manufactures (including imports) or processes more than 75,000 of a listed toxic chemical during calendar year 1984 or manufactures (including imports) or processes more than 50,000 lbs during calendar year 1988, or manufactures (including imports) or processes more than 25,000 lbs during calendar year 1989 or later, or otherwise use more than 110,000 lbs. of a listed toxic chemical during a calendar year, or, starting calendar year 2000, manufactured, processed, or Aotherwise-used@ the following chemicals in at least the following amounts during the calendar year for which the form is required:

100 pounds -	aldrin, methoxychlor, pendimethalin, polycyclic aromatic compounds, tetrabromobisphenyl A, trifluralin;
10 pounds -	chlordane, heptachlor, mercury, toxaphene, isodrin, polychlorinated biphenyls, benzo (g,h,i)perylene, hexachlorobenzene, mercury compounds, octachlorostyrene, pentachlorobenzene;
0.1 grams -	dioxin and dioxin-like compounds,

or, starting calendar year 2001, manufactured, process, or Aotherwise-used@ the following chemicals in at least the following amounts during the calendar year for which the form is required:

100 pounds -	lead which is not contained in a stainless steel, brass, or bronze alloy;
100 pounds -	lead compounds

The facility stated that the plant's primary SIC Code is 3353 and that the facility had approximately 800+ employees in 2005, 2006, and 2007. As indicated earlier, the facility reported for certain chemicals for calendar years 2005, 2006, and 2007. The remainder of the inspection involved the following:

1. Determining whether the plant fulfilled its reporting requirements for calendar years 2005, 2006, and 2007 for all chemicals it should have reported;

2. Determining the validity of the data on the chemicals the facility reported for calendar years 2005, 2006, and 2007.

Chemical Usage

Chemical usage records for calendar years 2005, 2006, and 2007 were derived from the receiving, throughput, and Form R records. According to the information provided by the facility, the facility's EPCRA Section 313 chemical usages during 2005, 2006, and 2007 were as follows (all figures are in pounds):

Reporting Year	**Chemical**	**Activity (lb) M-Manufacture P-Processed O-Other Used**	**Total Pounds of Chemical**	**Toxic Chemical Release Report Filed**
2005	Chromium Compounds	P & O	7,926	Form R
2005	Manganese	P	49,230	Form R
2005	Chlorine	M	2,301	Form R
2005	Lead	P	192	Form R
2005	N-Butyl Alcohol	O	42,280	Form R
2005	Dioxin & Dioxin-like Compounds	M	218.41299 *GRAMS	Form R
2005	1,2,4 - Trimethylbenzene	O	54,950	Form R
2005	Copper	P	15,875	Form R
2005	Hydrochloric Acid	M	45,001	Form R
2005	Ethyl benzene	O	18,810	Form R
2005	Xylene	O	88,020	Form R
2006	Chromium Compounds	P & O	8,693	Form R
2006	Manganese	P	51,986	Form R
2006	Chlorine	M	2.301	Form R
2006	Lead	P	192	Form R
2006	N-Butyl Alcohol	O	49,900	Form R
2006	Dioxin & Dioxin-like Compounds	M	224.17462 *GRAMS	Form R
2006	1,2,4 - Trimethylbenzene	O	59,450	Form R
2006	Copper	P	17,701	Form R
2006	Hydrochloric Acid	M	44,231	Form R
2006	Ethyl benzene	O	18,385	Form R
2006	Xylene	O	87,490	Form R
2006	Naphthalene	O	11,990	Form R
2006	Toluene	O	12,370	Form R

Reporting Year	Chemical	Activity (lb) M-Manufacture P-Processed O-Other Used	Total Pounds of Chemical	Toxic Chemical Release Report Filed
2007	Chromium Compounds	P & O	9,238	Form R
2007	Manganese	P	45,286	Form R
2007	Chlorine	M	2,481	Form R
2007	Lead	P	212	Form R
2007	N-Butyl Alcohol	O	48,450	Form R
2007	Dioxin & Dioxin-like Compounds	M	254.43 *GRAMS	Form R
2007	1,2,4 - Trimethylbenzene	O	52,200	Form R
2007	Copper	P	22686	Form R
2007	Hydrochloric Acid	M	91,511	Form R
2007	Ethyl benzene	O	15,045	Form R
2007	Xylene	O	72,720	Form R
2007	Naphthalene	O	12,910	Form R
2007	Toluene	O	11,630	Form R

Data Quality

As indicated in the table above, the facility filed Form R's for chemicals in the calendar years 2005, 2006, and 2007. No Form A's were filed during these three years. According to 40 C.F.R. Section 372.27, the facility is entitled to submit a Form A (a two-page certification form) instead of a Form R for a given chemical for a given calendar year if it:

A. meets the basic SIC code, threshold, and employee criteria;

B. manufactures, process, or otherwise-uses less than 1,000,000 pounds of that chemical during that year;

C. it generated a reportable amount of that chemical of less than 500 pounds during that year (the reportable amount consists of the summation of the quantity released, the quantity used for energy recovery on-site, the quantity used for energy recovery off-site, the quantity recycled on-site, the quantity recycled offsite, the quantity treated on-site, and the quantity treated off-site). This reportable threshold was increased to 5,000 pounds, starting the 2006 reporting year.

VIII. Issues Discussed during Inspection

Pre-Inspection Concerns/Responses:

- Concern: The Facility reported significantly higher overall air emissions in 2007 (94,236 lbs) than in 2006 (31,256) and 2005 (32,216).
- **Response:** The bulk of the emissions change can be attributed to an emissions factor change for the six (6) sheet Mill casting house holding furnaces. The emissions factor changed from 0.008 #/hr to 1.78 #/hr. (see Attachment-9) This factor change resulted in additional reporting pounds from the holders.

- Concern: The Facility reported unusually high levels of DLC's being land-filled offsite. (~ 220 grams annually)

- **Response:** Lancaster uses dioxin emissions release factors from Secondary Aluminum MACT stack testing for air emissions, and the Aluminum Association's Guidance for reporting PBT's from Aluminum Operations under 40 CFR Part 372 for solid waste releases. The recommended solid waste release factor is 719.83 ug/Mg of Al processed. (see Attachment-15)

- Concern: The Facility checked the box on the Form R indicating that they import Lead.

- **Response**: Lancaster does import Lead to the plant from Canada. Alcoa imports Lead into their manufacturing process as a trace impurity in nearly all purchased scrap; which is the raw material destined to be melted, alloyed, and fabricated into their aluminum sheet and plate products. Alcoa will re-file to correct the error.

During Inspection Concerns:

- Concern: What is DROSS and how does it affect chemical calculation numbers?
- **Response:** In the secondary aluminum production industry, scrap aluminum is melted in gas fired reverberatory or hearth furnaces. Impurities are removed from the molten aluminum using chlorine or other metal fluxes until the aluminum reaches the desired chemistry. This mix of metal

impurities, such as silica, hydrogen, calcium etc., which float to the surface of the molten metal, is called Dross. The mechanical process of removing the Dross layer from the surface of molten metal is inexact, and greatly impacts the aluminum content of the dross. As a result, Dross can have a variable amount of aluminum, anywhere from 10-90%. Alcoa does not have equipment to recover these metal units. Alcoa typically ships its dross to an independent Dross processor. The recycler melts the solidified Dross, removes the impurities from the aluminum, pours the molten aluminum into an ingot mold, and returns the metal units back to Alcoa. Lancaster calculates the total amount of TRI metals recycled off site by determining the average concentration of TRI chemicals in the metal returned to Alcoa times the total metal recycled (returned). (see attachment-13)

- Concern: Aluminum Dust was last reported in 1999. What changed so that it has not been reported since?
- **Response:** Alcoa generates Aluminum oxide from its annealing process and then it is sent to the baghouse. Aluminum converts to Aluminum Oxide in the annealing (molting) process and the Aluminum Oxide is not in a fibrous form. When not in a fibrous form, it is not a reportable TRI chemical and it does not count towards the dust or fume threshold totals. The Aluminum dust at the facility is minimal and is generated from the sawing activities. Much of the debris from the sawing process is comprised of chips and scrap.

IX. Closing Conference

Appropriate documents were requested by the EPA Inspector and the SARA Title III Section 313 investigation was concluded.

X. Attachments

A. Notice of Inspection
B. Receipt for Samples and Documents
C. Inspection Letter of Intent
1. Site Plan
2. Dioxin Shipments and Emission Factors
3. Example of Paint Breakdown
4. SARA 313 Report w/Formaldehyde example
5. New Emission Factor for MACT
6. Method Used to Calculate 2006 HCL totals
7. Organizational Chart
8. 2007 Emission Factor Number Information
9. Information Response Letter from Facility
10. HCL Reported Emissions for 2004-2007
11. TRI Reported Chemicals 2007
12. Calculation of Off-Site Recycling – Showing Change in Methodology
13. Dross and Recycling the Aluminum Content
14. Post Inspection E-mail referring to Lead Imports.
15. Post Inspection E-mail referring to DLC emission factor numbers.

SARA TITLE III SECTION 313 INSPECTION REPORT
09-313U-012

Facility
Alcoa (Alumax) Mill Products
1480 Manheim Pike
Lancaster, PA 17604

SIC: 3353

Date of Inspection
February 19, 2009

EPA Inspector
Robert Staves
Environmental Protection Specialist
Office of Enforcement, Compliance, and Environmental Justice
Phone - (215)-814-2962 Fax - (215)-814-2905

Summary of Findings

Alcoa Mill Products is a manufacturer of aluminum sheets and plates and has submitted a toxic chemical release report Form R or Form A for certain chemicals under Section 313 of SARA Title III for calendar years 2005, 2006, and 2007. This inspection was conducted to verify whether the facility fulfilled its reporting requirements under 40 C.F.R. Part 372 under Section 313 of SARA Title III for those years.

When presented questions regarding higher overall air emissions, increased off-site land filling, importation of lead, dross, and aluminum dust, the Facility provided valid information and documentation to explain any anomalies.

At this time, this inspector has no areas of concern regarding the Alcoa facility's SARA Title III Section 313 EPCRA program.

Robert Staves

NOTICE OF INSPECTION

U.S. ENVIRONMENTAL PROTECTION AGENCY

Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)

1. INVESTIGATION IDENTIFICATION			2. TIME	3. FIRM NAME
DATE	INSPECTOR NO.	DAILY SEQ. NO.		
02/19/09	F11671	2009-01	9 00 am	Alcoa Mill Products (Alumax Mill)

4. INSPECTOR ADDRESS
U. S. EPA Region III
1650 Arch Street
Mail Code: 3 EC10
Philadelphia, Pennsylvania 19103-2029

5. FIRM ADDRESS
1480 Manheim Pike
Lancaster, PA 17601

REASON FOR INSPECTION: This inspection is for the purpose of determining compliance with the Emergency Planning and Community Right-to-Know Act of 1986, Section 313 toxic chemical release reporting requirements. The scope of this inspection may include, but is not limited to: reviewing and obtaining copies of documents and records; interviews and taking of statements; reviewing of chemical manufacturing, importing, processing, and/or use facilities, including waste handling and treatment operations; taking samples and photographs; and any other inspection activities necessary to determine compliance with the Act.

INSPECTOR SIGNATURE		RECIPIENT SIGNATURE	
NAME: Robert Staves		NAME: BRIAN G. BREISINGER	
TITLE: Federal Inspector	DATE SIGNED: 02/19/09	TITLE: STAFF ENV. ENGINEER	DATE SIGNED: 2/19/09

EPA FORM 3540-35 (8-93)
★U.S. GPO: 1993-342-137/80115

ORIGINAL

ATTACHMENT B PAGE OF PAGES

EPA

US ENVIRONMENTAL PROTECTION AGENCY
Washington, DC 20460
Superfund Amendments and Reauthorization Act - Title III
Emergency Planning and Community Right-to-Know Act of 1986
RECEIPT FOR SAMPLES AND DOCUMENTS

Form Approved, OMB No. 2070-0007

1. INVESTIGATION IDENTIFICATION			2. FIRM NAME
DATE	INSPECTOR NO.	DAILY SEQ. NO.	Alcoa Mill Products (Alumax Mill)
02/19/09	F11671	2009-01	

3. INSPECTOR ADDRESS	4. FIRM ADDRESS
US EPA 1650 Arch Street 16th Floor, #413, 3EC10 Philadelphia, PA 19103	1480 Manheim Pike Lancaster, PA 17601

The documents and samples of chemical substances and/or mixtures described below were collected in connection with the administration and enforcement of the Emergency Planning and Community Right - to - Know Act of 1986.

RECEIPT OF THE DOCUMENTS(S) AND/OR SAMPLE(S) DESCRIBED IS HEREBY ACKNOWLEDGED:

NO.	DESCRIPTION
1	Site Map
2	Dioxin shipped/Emission factors
3	Example of paint Breakdown
4	Sara 313 Report w/formaldehyde example
5	New Emission Factor MACT
6	Method Used for 2006 Numbers
7	Organizational Chart
8	2007 #'s information for emissions
	Post Inspection
9	Response letter from facility for additional information
10	HCL Reported Emissions for 2004-2007
11	TRI Reported Chemicals 2007
12	Calculation of Off-Site Recycling-Showing Change in Methodology
13	Dross and Recycling the Aluminum Content
14	Post Inspection E-mail concerning import of Lead
15	Post Inspection E-mail concerning DLC numbers and factors

Chemical identities for underlined items have been claimed as trade secret. The facility official requesting such treatment has read and understands EPCRA Section 322 and pertinent trade secret regulations and understands EPCRA Section 325 which provides for (among other things) penalties for frivolous claims.

INSPECTOR SIGNATURE		RECIPIENT SIGNATURE	
NAME: Robert Staves		NAME: BRIAN G. BREISINGER	
TITLE: Federal Inspector	DATE SIGNED: 02/19/09	TITLE: STAFF ENV. ENGR	DATE SIGNED: 2/19/09

EPA FORM 7740-1 (12-82) INSPECTOR'S FILE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Mr. Tim Fitzpatrick
Regulatory Contact
Alumax Mill Products, Inc (Alcoa)
1480 Manheim Pike
Lancaster, PA 17604

February 5, 2009

Re: Superfund Amendments and Reauthorization Act (SARA) Title III Section 313
Compliance Monitoring Inspection

Dear Mr. Fitzpatrick:

This is to follow up our February 5, 2009 telephone conversation concerning a SARA Title III Section 313 (a.k.a. EPCRA Section 313) compliance inspection pertaining to your facility, located at 1480 Manheim Pike, Lancaster, PA 17604 on February 19, 2009. I plan to arrive at your facility at approximately 9:00 am. During the inspection, I will review and would like to obtain copies of the following documents pertaining to the aforesaid facility:

I. SARA Title III Section 313 – Emergency Planning and Community Right-to-Know Act

X A list of all EPCRA Section 313 chemicals manufactured, processed, or used at the facility during 2005, 2006, and 2007, including those chemicals that did not exceed the applicable thresholds for reporting under EPCRA Section 313;

X 2005, 2006, and 2007 chemical activity calculations (in pounds) of each EPCRA Section 313 chemical manufactured, processed, or used - with supporting documentation, such as, beginning and end-of-year inventory and purchase summaries;

X EPA Form R submission supporting documents for calendar years 2005, 2006, and 2007. Including; release calculations, off-site transfer calculations, mass balances, and measurements.

II. Other Pertinent Information

X A brief description of the facility's background and operations;

X Facility map and plot plan;

X The facility's organizational chart;

X A brief summary of the facility's processes.

Attachment - C

Table 16 - Demonstration of Compliance SAPU #5

Particulate Matter Test Results SAPU #5 Regulatory/SAPU #5 PM Emission Limit 0.27 #/ton Al Conducted 8/2007				
	Test Run #1	Test #2	Test #3	SAPU Emission Rate (#/Ton)
PM (#/hr)	0.0258	0.0270	0.0306	
Rate (tons Al/hr)	3.46	3.38	3.68	
# PM/ Ton	0.0075	0.0083	0.0083	**0.0080**

Hydrochloric Acid Test Results SAPU #5 Regulatory/SAPU #5 HCl Emission Limit 0.28 #/ton Al Conducted 8/2007				
	Test Run #1	Test #2	Test #3	SAPU Emission Rate (#/Ton)
HCl (#/hr)	0.0342	0.0205	0.0380	
Rate (tons Al/hr)	3.46	3.38	3.68	
# HCl/ Ton	0.0099	0.0061	0.0103	**0.0088**

Dioxins & Furans (TEQ) Test Results SAPU #5 Regulatory/SAPU #5 D/F Emission Limit 15.0 ug TEQ/Mg Conducted 11/2002				
	Test Run #1	Test #2	Test #3	SAPU Emission Rate (ug TEQ/Mg)
Total TEQ (ug's)	17.5	16.4	15.6	
Total Charge (Mg)	60.2	58.2	54.5	
Ug TEQ/ Mg	0.292	0.282	0.287	**0.287**

SAPU #6 – Sheet Holders 5-10

This SAPU consists of (6) uncontrolled group 1 holding furnaces. one group 1 holding furnace. Emissions limits for the SAPU and the supporting initial performance test results documenting initial compliance for Emissions Units in the SAPU is provided in Table 17. below.

Attachment-5 - New Emission Factor MACT

Table 17 - Demonstration of Compliance SAPU #6

	Particulate Matter Test Results SAPU #6 Regulatory/SAPU #6 PM Emission Limit 0.4 #/ton Al Conducted 6/2006			
	Test Run #1	Test #2	Test #3	**SAPU Emission Rate (#/Ton)**
PM (#/hr)	0.250	0.174	0.238	
Feed Rate (tons/hr)	7.46	7.34	9.21	
# PM/ Ton	0.0335	0.0237	0.0258	**0.0277**
	Hydrochloric Acid Test Results SAPU #5 Regulatory/SAPU #6 HCl Emission Limit 0.4 #/ton Al Conducted 6/2006			
	Test Run #1	Test #2	Test #3	**SAPU Emission Rate (#/Ton)**
HCl (#/hr)	1.79	2.04	1.51	
Feed Rate (tons/hr)	7.46	7.34	921	
# HCl/ Ton	0.240	0.278	0.164	**0.227**

Mean of #'s is new Emission factor

Table 18 - Demonstration of Compliance Sheet Melters – Sampling Upstream of Add-On Control Device to Show Demonstrate Compliance Without Baghouse While Processing Clean Charge Materials

	Particulate Matter Test Results Typical Sheet Melting Furnace Upstream of Baghouse Control PM Emission Limit 0.4 #/ton Al Conducted 6/2006			
	Test Run #1	Test #2	Test #3	**Emission Rate (#/Ton)**
PM (#/Hr.)	0.318	0.261	0.103	
Charge (Tons/Hr.)	7.65	6.02	8.39	
# PM/ Ton	0.0416	0.0433	0.0122	**0.0324**
	Hydrochloric Acid Test Results Typical Sheet Melting Furnace Upstream of Baghouse Control HCl Emission Limit 0.4 #/ton Al Conducted 6/2006			
	Test Run #2	Test #3	Test #4	**Emission Rate (#/Ton)**
HCl (#/Hr.)	0.0124	0.0091	0.0106	
Charge (tons)	7.65	6.02	8.39	
# HCl/ Ton	0.00162	0.00151	0.00126	**0.00146**

TABLE 2 - 1

SUMMARY OF STACK GAS CHARACTERISTICS & EMISSIONS DATA

ALCOA MILL PRODUCTS

 # 8 HOLDING FURNACE

ENTIRE BATCH SAMPLE TRAIN

Lancaster, PA

PARAMETER	RUN # 1	RUN # 2	RUN # 3	RUN # 4	AVERAGE
Test ID	M5/26A-1	M5/26A-2	M5/26A-3	M5/26A-4	
Date	7-Dec-99	8-Dec-99	8-Dec-99	9-Dec-99	
Time	0853-1457	0746-1304	1348-1814	1027-1511	
Length of Test Run, (min)	358.9	309.5	254.4	279.5	
Oxygen, (%)	20.6	20.6	20.6	20.6	20.6
Carbon Dioxide, (%)	0.0	0.0	0.0	0.0	0.0
Moisture, (%)	0.8	0.6	1.1	0.9	0.8
Exhaust Temperature, (F)	183.6	170.0	178.3	176.9	177.2
Exhaust Velocity, (ft/sec)	18.1	17.8	18.0	18.1	18.0
Flow Rate, (acfm)	7,450	7,345	7,416	7,483	7,424
Flow Rate, (dscfm)	6,093	6,112	6,061	6,163	6,107
Production Rate, (lbs)	60,320	59,840	59,480	59,800	59,860
Batch Length, (hours)	6.1	5.3	4.4	4.7	5.1
Hourly Production Rate, (ton/hr)	5.0	5.6	6.7	6.3	5.9
Front Half Particulate Matter, (gr/dscf	0.0022	0.0068	0.0056	0.0074	0.0055
Front Half Particulate Matter, (lb/hr)	0.1149	0.3581	0.2915	0.3924	0.2892
Front Half Particulate Matter, (lb/ton)	0.0228	0.0617	0.0416	0.0611	0.0468
Back Half Particulate Matter, (gr/dscf	0.0001	0.0001	0.0003	0.0001	0.0002
Back Half Particulate Matter, (lb/hr)	0.0054	0.0074	0.0161	0.0067	0.0089
Back Half Particulate Matter, (lb/ton)	0.0011	0.0013	0.0023	0.0010	0.0014
Total Particulate Matter, (gr/dscf)	0.0023	0.0070	0.0059	0.0076	0.0057
Total Particulate Matter, (lb/hr)	0.1203	0.3654	0.3077	0.3990	0.2981
Total Particulate Matter, (lb/ton)	0.0239	0.0630	0.0439	0.0622	0.0482
Hydrogen Chloride, (ppmv)	0.2357	No Sample	0.2170	0.2407	0.2311
Hydrogen Chloride, (lb/hr)	0.0082	No Sample	0.0075	0.0084	0.0080
Hydrogen Chloride, (lb/ton)	0.00162	No Sample	0.00106	0.00131	0.00133

Calculated lb/ton values based on length of test run.

Total g of dioxins shipped

Attachment -2 Dioxin Shipped/Emission Factors

Air Emission and Solid Waste Release Factors:

Dioxin/furan air emission factors (controlled and uncontrolled) and a solid waste release factor were developed for Category IA, IB and IC - Group 1 furnaces. **Tables 2.8, 2.9,** and **2.10** summarize D/F factors for Category I furnaces.

Category II - Group 1 furnaces utilize work practices to control air emissions; therefore, air emission factors were developed based on furnace stack emissions. Emission factors were developed for Category IA and IB furnaces. **Tables 2.11** and **2.12** summarize D/F factors for Category II - Group 1 furnaces.

Category IA

The uncontrolled, controlled and solid waste factors in **Table 2.8** are based on average data from the Wabash furnace test. The total D/F control efficiency for this type of furnace is 96%. Appendix A - **Table A.4** contains detail on emissions factor calculations.

Table 2.8 Category IA - Group 1 Furnaces
D/F Emission and Release Factors

D/F Cogener	Uncontrolled Emission Factor ug/Mg	Controlled Emission Factor ug/Mg	Solid Waste Release Factor ug/Mg
2,3,7,8 - TCDD	2.25	0.25	2.00
1,2,3,7,8 - PeCDD	7.87	0.75	7.12
1,2,3,4,7,8 - HxCDD	7.62	0.53	7.09
1,2,3,6,7,8 - HxCDD	11.50	0.65	10.86
1,2,3,7,8,9 - HxCDD	17.84	1.29	16.55
1,2,3,4,6,7,8 - HpCDD	55.95	2.84	53.10
OCDD	39.81	2.10	37.71
2,3,7,8 - TCDF	38.05	5.50	32.55
1,2,3,7,8 - PeCDF	32.26	1.90	30.37
2,3,4,7,8 - PeCDF	41.43	3.18	38.25
1,2,3,4,7,8 - HxCDF	86.37	4.65	81.72
1,2,3,6,7,8 - HxCDF	94.15	1.48	92.67
2,3,4,6,7,8 - HxCDF	53.84	1.87	51.97
1,2,3,7,8,9 - HxCDF	36.04	0.08	35.96
1,2,3,4,6,7,8 - HpCDF	59.22	2.97	56.26
1,2,3,4,7,8,9 - HpCDF	120.23	0.24	120.00
OCDF	46.72	1.04	45.67
Total D/F	**751.16**	**31.33**	**719.83**

Category IB

The uncontrolled, controlled and solid waste factors in **Table 2.9** are based on average data from the Reynolds Metals Alabama furnace test. The total D/F control efficiency for this type of furnace is 99%. Appendix A - **Table A.5** contains detail on emissions factor calculations.

Table 2.9 Category IB - Group 1 Furnaces
D/F Emission and Release Factors

D/F Cogener	Uncontrolled Emission Factor ug/Mg	Controlled Emission Factor ug/Mg	Solid Waste Release Factor ug/Mg
2,3,7,8 - TCDD	1.93	0.06	1.87
1,2,3,7,8 - PeCDD	8.01	0.08	7.93
1,2,3,4,7,8 - HxCDD	13.30	0.03	13.27
1,2,3,6,7,8 - HxCDD	9.40	0.04	9.36
1,2,3,7,8,9 - HxCDD	7.04	0.03	7.01
1,2,3,4,6,7,8 - HpCDD	21.42	5.17	16.24
OCDD	18.51	0.61	17.91
2,3,7,8 - TCDF	36.43	0.61	35.82
1,2,3,7,8 - PeCDF	51.47	0.37	51.11
2,3,4,7,8 - PeCDF	71.25	0.32	70.93
1,2,3,4,7,8 - HxCDF	79.26	0.26	79.00
1,2,3,6,7,8 - HxCDF	62.78	0.17	62.62
2,3,4,6,7,8 - HxCDF	39.84	0.13	39.71
1,2,3,7,8,9 - HxCDF	28.23	0.07	28.16
1,2,3,4,6,7,8 - HpCDF	155.27	0.39	154.88
1,2,3,4,7,8,9 - HpCDF	72.15	0.08	72.07
OCDF	80.39	0.47	79.92
Total D/F	**756.71**	**8.89**	**747.82**

Category IC

The uncontrolled, controlled and solid waste factors in **Table 2.10** are based on average data from the Culp Aluminum furnace test. The total D/F control efficiency for this type of furnace is 99%. Appendix A - **Table A.6** contains detail on emissions factor calculations.

Table 2.10 Category IC - Group 1 Furnaces
D/F Emission and Release Factors

D/F Cogener	Uncontrolled Emission Factor ug/Mg	Controlled Emission Factor ug/Mg	Solid Waste Release Factor ug/Mg
2,3,7,8 - TCDD	1.23	0.03	1.19
1,2,3,7,8 - PeCDD	7.83	0.10	7.74
1,2,3,4,7,8 - HxCDD	8.94	0.07	8.87
1,2,3,6,7,8 - HxCDD	13.93	0.12	13.81
1,2,3,7,8,9 - HxCDD	19.95	0.18	19.78
1,2,3,4,6,7,8 - HpCDD	84.13	0.50	83.63
OCDD	131.35	0.72	130.63
2,3,7,8 - TCDF	25.22	0.70	24.52
1,2,3,7,8 - PeCDF	29.61	0.52	29.09
2,3,4,7,8 - PeCDF	55.58	0.83	54.75
1,2,3,4,7,8 - HxCDF	180.76	1.54	179.21
1,2,3,6,7,8 - HxCDF	62.92	0.57	62.34
2,3,4,6,7,8 - HxCDF	94.28	0.72	93.56
1,2,3,7,8,9 - HxCDF	5.61	0.04	5.57
1,2,3,4,6,7,8 - HpCDF	307.29	2.00	305.29
1,2,3,4,7,8,9 - HpCDF	50.17	0.34	49.83
OCDF	529.98	1.83	528.15
Total D/F	**1608.77**	**10.81**	**1597.96**

MATERIAL SAFETY DATA SHEET

Prepared in compliance with the Federal Hazard Communication Standard 29CFR 1910.1200

PRODUCT CODE : 497-B824

SECTION I

JP 3639-2
Sm 2.19.09

MANUFACTURER'S NAME: Becker Specialty Corporation

MANUFACTURER'S ADDRESS: 2500-26 Delta Lane
Elk Grove Village, Illinois 60007

EMERGENCY/INFORMATION: 8:00 a.m.-5:00 p.m. (847)766-3555
All Other Times (847)475-6405
(847)656-8191

TRANSPORTATION EMERGENCIES: CHEMTREC (800)424-9300

MANUFACTURER CODE IDENTIFICATION: 497-B824

CUSTOMER CODE IDENTIFICATION:

CUSTOMER NAME: ALCOA MILL PRODUCTS-PA

PRODUCT NAME: 30G. SAM'S BLUE

PRODUCT CLASS: POLYESTER

PRODUCT TRADE NAME: DURAGLOSS 3000

PREPARATION DATE : 02/13/09

SECTION II - HAZARDOUS INGREDIENTS

			OCCUPATIONAL: EXPOSURE LIMITS ALL VALUES 8 HOUR TWA UNLESS NOTED					
INGREDIENT	CAS NUMBER	ACGIH-TVL	OSHA-PEL	OTHER	UNITS	LEL	V.P.	% BY WEIGHT
1,2,4-Trimethyl Benzene	95-63-6	25	25	NE	PPM	NDA	NDA	0.0 - 6.0
2-Butoxyethanol	111-76-2	25-SK	25-SK	NE	PPM	1.1	0.9	0.0 - 9.0
Aromatic Petroleum Distillates	64742-94-5	NE	NE	100	PPM	1.0	<1.9	17.0 - 27.0
Isobutyl Alcohol	78-83-1	50	100	NE	PPM	1.2	9.0	0.0 - 6.0
N-butyl Alcohol	71-36-3	50-C	50-C	NE	PPM	1.4	4.4	0.0 - 6.0
Naphthalene	91-20-3	10	10	NE	PPM	NDA	0.1	0.0 - 5.0
1,2,3-trimethylbenzene	526-73-8	25	NE	25	PPM	0.88	1	0.0 - 6.0
Amorphous Silica	112926-00-8	NE	6*	NE	MGCM	N/A	N/A	
Propylene Glycol Monomethyl Ether Acetate	108-65-6	NE	NE	NE	NE	1.3	3.7	
Titanium Dioxide	13463-67-7	10 TOT*	10 TOT*	NE	MGCM	N/A	N/A	
Chromium Containing Pigment or Compound	Various	0.5 as Cr*	1.0 as Cr*	NE	MGCM	N/A	N/A	

This material contains ingredients covered by the California 'SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (PROP. 65)'

NOTES AND ABBREVIATIONS USED:

SK : Skin absorption may potentially contribute to overall exposure
TWA : Time weighted average
C : Ceiling limit
PPM : Parts per million
MGCM : Milligrams per cubic meter
NE : Not established
N/A : Not applicable
OTHER : Manufacturer recommended PEL
V.P. : Vapor pressure listed mm Hg @ 20 C unless otherwise noted

Attachment - 3 Example of Paint Breakdown

SARA 313 CAS REPORT TOTALS

From: 1/1/2008
To: 12/31/2008

CAS NUMBER		CAS GALS USED
50000	Formaldehyde	226.02
67630	Isopropyl alcohol (manufacturing-strong acid process,no supplier notification)	53.24
71363	n-Butyl alcohol	5611.82
91203	Naphthalene	1215.56
95636	1,2,4-Trimethylbenzene	4669.37
98828	Cumene	0.50
100414	Ethylbenzene	1605.21
108101	Methyl isobutyl ketone	220.44
108883	Toluene	1349.59
131113	Dimethyl phthalate	832.91
1330207	Xylene (mixed isomers)	7602.86

Attachment - 4 SARA 313 Report w/formaldehyde example

SARA 313 CAS REPORT DETAIL

From: 1/1/2008
To: 12/31/2008

CAS NUMBER		PAINT CODE	CAS GALS USED
50000	Formaldehyde	DA1B00-	0.35
		DA8B00-	38.65
		DP1130-	0.26
		DP8152-	0.11
		GA7113-	0.09
		GP9165-	0.23
		HE8B06-	25.62
		HP2B02-	0.04
		HP8B60-	1.49
		LP0000-	0.13
		LP8411-	0.13
		LP8482-	0.18
		LP8861-	0.42
		LP9153-	0.03
		LP9179-	0.29
		LP9188-	0.10
		ME0A00-	0.37
		MV0A04-	9.60
		MV5400-	1.47
		PE0212-	0.53
		PE3B05-	0.10
		PE5B01-	73.92
		PE8A30-	1.26
		PE8B01-	0.28
		PE8B22-	8.89
		PE8B24-	1.28
		PE8B26-	2.42
		PE8B61-	3.96
		VA3163-	13.96
		VE0A03-	0.23
		VE8313-	1.57
		VF2138-	0.93
		VF2139-	0.52
		VF2144-	0.02
		VF2146-	0.02
		VF2255-	0.34

CAS NUMBER		PAINT CODE	CAS GALS USED
50000	Formaldehyde	VF2256-	0.22
		VF2261-	0.02
		VF2265-	0.02
		VF2281-	0.02
		VF2282-	0.02
		VF2304-	0.00
		VF2305-	0.02
		VF2459-	0.32
		VF2471-	0.02
		VF2472-	0.04
		VF2481-	0.01
		VF2488-	0.02
		VF2490-	0.03
		VF2491-	0.02
		VF2492-	0.03
		VF2494-	0.02
		VF2511-	0.03
		VF2522-	0.02
		VF2523-	0.01
		VF2524-	0.02
		VF2525-	0.02
		VF2526-	0.02
		VF2615-	0.04
		VF2616-	0.02
		VF2617-	0.01
		VF2704-	0.02
		VF2706-	0.02
		VF2803-	0.30
		VF3175-	0.11
		VF3176-	0.04
		VF3191-	0.01
		VF3195-	0.33
		VF3197-	0.13
		VF3261-	0.01
		VF3272-	0.13
		VF3278-	0.03
		VF3453-	0.20
		VF3456-	0.85

CAS NUMBER		PAINT CODE	CAS GALS USED
50000	Formaldehyde	VF3457-	0.11
		VF3464-	0.03
		VF34AA-	0.22
		VF34AB-	0.33
		VF34AF-	0.03
		VF3538-	0.06
		VF3625-	0.01
		VF3626-	0.02
		VF3638-	0.03
		VF3710-	0.14
		VF3726-	0.02
		VF3858-	0.02
		VF3A04-	0.96
		VP1824-	0.08
		VP7303-	0.02
		VS8A04-	0.48
		ZE0202-	0.27
		ZE0265-	22.97
		ZE0272-	0.35
		ZE0288-	1.30
		ZP0231-	0.04
		ZP0266-	0.68
		ZP0276-	2.24
		ZP0283-	2.72
		50000 TOTAL:	**226.02**
67630	Isopropyl alcohol (manufacturing-strong acid process,no supplier notification)	GP3198-	45.47
		GP7206-	6.00
		GP9165-	1.78
		67630 TOTAL:	**53.24**
71363	n-Butyl alcohol	DA1B00-	3.75
		DA8B00-	527.10
		DP1130-	15.39
		DP8152-	6.72
		HE3B12-	8.40
		HE8B06-	56.37
		HP1303-	3.52
		HP1431-	2.50
		HP2426-	2.10

FORMULA FOR CALCULATING HCl EMISSIONS:

2005-2006

→ 0.008 #Hr/HCl · HOLDING FURNACES OP HRS. IN 2005/2006 YR.

EX. 2006

$$0.008 \frac{\#\,HCl}{Hr} \times \frac{\overset{\#5\ Hold}{8133} + \overset{\#6}{8096} + \overset{\#7}{7906} + \overset{\#8}{7623} + \overset{\#9}{7654} + \overset{\#10}{7709}\ Hrs}{}$$

$$0.008 \frac{\#\,HCl}{Hr} \times \frac{39294.6\ Hrs}{1} = 314.35\ \#\,HCl \quad 2006$$

chlorine flux portion is approximately one third of the total batch duration. During this portion the PM emissions are about 3 times higher than the average PM emission rate for the entire batch. This indicates that the majority of the PM emissions occur during the chlorine flux step. Note that the front half PM fractions consisted of the filter catch and the nozzle, probe and front half glassware acetone rinse. The back half PM fraction consisted of the DI impinger catch along with the DI rinse of the back half glassware.

The average HCl emission rate for the entire batch was 0.0080 lb/hr (based on three samples) compared to 0.0321 lb/hr (based on four samples) during the chlorine flux portion of the batch. Again, these data indicate that nearly all of the HCl emissions occur during the chlorine flux portion of the batch.

Table 2-3 provides a summary of the laboratory data. The "% BH PM" column represents the percentage of the total PM caught in the back half (DI Impinger water) of the sample trains. On average only 4.2 percent of the total PM was collected in the back half of the Method 5 sample train. Separate analyses for hydrogen chloride of the DI impinger catch and the 0.1 N H_2SO_4 impinger catch was also performed to determine the amount of HCl collected ahead of the slightly acidic impingers. On average, approximately one half of the HCl was collected in the DI impingers.

The calculated test results for each test run are provided in Appendix A. The raw field data can be found in Appendix B. Analytical data are provided in Appendix C.

Attachment-6 - Method Used for 2006 Numbers

Table 7-9
PARTICULATE MATTER AND HYDROGEN CHLORIDE
TEST RESULTS
ALCOA MILL PRODUCTS
SHEET FACILITY - HOLDER # 7 EXHAUST - CLEAN CHARGE
LANCASTER, PA

	RUN NUMBER	M5/26A-1	M5/26A-2	M5/26A-3	AVERAGE
	RUN DATE	6/8/2006	6/8/2006	6/8/2006	
	RUN TIME	1040-1517	1630-2112	2134-0238	
	MEASURED DATA				
(Y)	Meter Box Y	0.9903	0.9903	0.9903	
(DeltaH)	Avg Delta H, inches H_2O	0.53	0.51	0.58	
(Pbar)	Barometric Pressure, inches Hg	29.41	29.41	29.41	
(Vm)	Meter Volume, ft^3	122.673	122.505	135.734	
(Tm)	Avg Meter Temp, deg F	89	90	78	
(Pg)	Static Pressure; inches H_2O	-0.07	-0.08	-0.08	
(Ts)	Avg Stack Temp, deg F	211	198	196	201.7
(Vlc)	Water Collected, mL	51.3	49.2	59.7	
(%CO_2)	Carbon Dioxide, %	0.2	0.1	0.1	0.1
(%O_2)	Oxygen, %	20.5	20.6	20.6	20.6
(%N_2)	Nitrogen, %	79.3	79.3	79.3	79.3
(Cp)	Pitot Tube Coefficient	0.84	0.84	0.84	
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	0.2930	0.2901	0.3016	
(Theta)	Sample Time, min	274	278	300	
(Dn)	Nozzle Diameter, inches	0.295	0.295	0.295	
	CALCULATED DATA				
(Vmstd)	Standard Meter Volume, ft^3	114.963	114.580	129.822	
(Ps)	Stack Pressure, inches Hg	29.40	29.40	29.40	
(%H_2O)	Moisture, %	2.1	2.0	2.1	2.1
(Vwstd)	Standard Water Vapor Volume, ft^3	2.419	2.320	2.815	
(Mfd)	Dry Mole Fraction	0.979	0.980	0.979	
(Md)	Molecular Weight-dry, lb/lb-mole	28.85	28.84	28.84	
(Ms)	Molecular Weight-wet, lb/lb-mole	28.63	28.62	28.61	
(Vs)	Velocity, ft/s	18.8	18.4	19.1	18.8
(A)	Stack Area, ft^2	7.07	7.07	7.07	
(Qa)	Volumetric flow, acfm	7,966	7,812	8,112	7,963
(Qs)	Volumetric flow, dscfm	6,031	6,035	6,276	6,114
(I)	Isokinetic Rate, %	103.6	101.7	102.7	
	EMISSIONS DATA				
	FILTERABLE PARTICULATE (PM)				
(grams)	Filterable Particulate Catch, g	0.0360	0.0250	0.0372	0.0327
(gr/dscf)	Concen., gr/dscf	0.00483	0.00337	0.00442	0.00421
(gr/acf)	Concen., gr/actual cf	0.00366	0.00260	0.00342	0.00323
(lb/hr)	Emission Rate, lb/hr	0.2498	0.1742	0.2379	0.2206
(lb/run)	Emission Rate, lb/run	1.141	0.807	1.189	1.046
	HYDROGEN CHLORIDE (HCl)				
(Fwt)	Formula Weight	36.46	36.46	36.46	
(mg)	Catch, milligrams	257.617	292.84	235.459	261.972
(ppm)	Concentration, ppm	52.207	59.544	42.255	51.336
(lb/hr)	Emission Rate, lb/hr	1.7878	2.0403	1.5058	1.7780
(lb/run)	Emission Rate, lb/run	8.164	9.453	7.529	8.382

Attachment-8 - 2007 #'s information

March 2, 2009

Mr. Robert Staves
EPA Region III
1650 Arch Street
Philadelphia, PA 19103

Dear Mr. Staves:

This letter is a follow-up for your request for additional information to that obtained during your February 19, 2009 inspection at the Alcoa Mill Products Plant in Lancaster, PA. The numbered points were detailed in bulleted form and given to Alcoa.

1. You specifically wanted an example of the Plants hydrochloric acid emissions calculations for the years 2005, 2006, and 2007. Exhibit I shows the calculations that illustrate the difference in HCl emissions from years 2004 - 2007. The bulk of emissions change can be attributed to an emissions factor change for the Plants six (6) sheet Mill casting house holding furnaces. The emissions factor changed from 0.008 #/Hr. to 1.78 #/hr. HCl. This emissions factor change resulted in the reporting of an addition of approximately 76,000 pounds of HCl from the Holders from year 2006 to 2007.

2. You requested a narrative of the TRI chemicals used at the Plant. Exhibit II provides brief descriptions of the TRI chemical s reported for year 2007 and their uses in the Plant. The reporting thresholds are also indicated as are descriptions of the Plants emissions and off site transfers.

3. You noted that Section 3.1 of the Plant's 313 report since 2001 have the box marked "import" for the TRI chemical Lead. Alcoa Lancaster misunderstood the definition of "import" for the purposes of TRI reporting. Lancaster does not import Lead to the Plant from another country. Rather, "imported" was checked because Alcoa literally imports this chemical into our manufacturing process as a trace impurity in nearly all purchased scrap; which is the raw material destined to be melted, alloyed and fabricated into our aluminum sheet and plate products. Alcoa will re-file to correct this error.

4. You wanted an explanation for the number change in the amount of dross processed from year 2004 to 2005. Analysis of the reported amount of TRI chemicals recycled off site apparently increased significantly from 2004 to 2005. Up to and including year 2004, Alcoa calculated the amount of TRI metals recycled off-site. Dross shipments (generation rates) in pounds were obtained for the individual calendar year(s). Representative bulk samples of dross were obtained and analyzed for TRI chemical constituents. The product of these two numbers was entered in to section 8.5 (Off site recycling) for the appropriate TRI chemical.

Post Inspection Attachment - 9

Starting in year 2006, Alcoa employed a more accurate method to determine the amounts entered into Section 8.5. Alcoa now obtains the exact amount of aluminum recycled off site from skim and dross, and multiplies this amount by the TRI chemical content of the metal returned. The concentration of the metallic compounds is determined by spectophotometric methods. This more accurate method determines the exact amount of TRI compounds are present in the aluminum recycled from the skim and dross waste stream. See Exhibit III for a comparison of the actual Section 8.5 calculations for years 2004 and 2005.

5. You wanted Lancaster to verify the calculation methodology for the chemicals N-Butyl Alcohol, 1, 2, 4-Trimethylbenzene, Ethylbenzene, Xylene and Toluene because of varying amounts of these chemical are reported in Section 8.6 (treated on-site) from year to year. The methodology used to calculate the amount of these chemicals treated on site has not changed for some time (year 2001), and the difference in the Section 8.6 numbers can be attributed to changing customer demands for the hundreds of different coatings that the Plants Coil Coating Line can process. In 2007, Alcoa attempted to have waste coating materials that contain the aforementioned chemicals processed off site. This represented the only recent change that would have impacted this Section 8.6 number.

6. The amount of chlorine reported in Section 8.1(b) in the Plant's 2005 and 2006 TRI report are identical. This was an administrative error. The value was incorrectly transposed to the 2006 report by mistake. Peer review of the 2006 report did not catch the error. Lancaster will enhance the review process to prevent future transposing errors and file a correction.

7. A description of aluminum dross and how this material relates to TRI chemicals is also enclosed as Exhibit IV.

EXHIBIT I

Alcoa Lancaster Hydrochlorinc Acid Reported Emissions years 20

HCl Sources	2004 Emission Factor	2004 Operating Hours	2004 Lbs. HCL	2005 Emission Factor	2005 Operating Hours	2005 Lbs. HCL	2006 Emission Factor	2006 Operating Hours
Sheet Holder	[redacted]							
Sheet Holder								
Sheet Holder								
Sheet Holder								
Sheet Holder								
Sheet Holder								
Sheet Melters								
Sheet Melters								
Plate Casting								
Plate Casting								
Plate Casting								
Total Plate HC								
Total Facility HCL Emissions								

Post Inspection Attachment-10

04-2007

Lbs. HCL	Emission Factor	2007 Operating Hours	Lbs. HCL
[redacted]			

EXHIBIT II
Narrative SARA 313 TRI Chemicals Reported at Alcoa Lancaster Operations

TRI Reported Chemicals

1. Chlorine: Chlorine gas is purchased and is used by Alcoa to process molten metal. Chlorine gas removes impurities in molten aluminum prior to ingot casting. The TRI reporting threshold for this "otherwise used" chemical used as a process aid is #10,000. Lancaster's records indicate that 28,900 #'s of chlorine was used in 2007. The majority of this chemical combines with metal impurities to form various metal chlorides and is removed from the Plant in aluminum dross. However, a relatively small amount of chlorine gas is emitted from the Plant's furnaces where chlorine is added. Chlorine is only emitted from the Plant through air emissions.

Year 2007 Chlorine TRI Summary
Results in #'s

Total Cr used **28,900**

		TRI Element	2007
Air	**Fugitive - Non-Point**	5.1	**1**
	Stack - Point	5.2	**2478**
	Treated on -site	8.6	**0**
Water	**Stream Discharge**	5.31.	**0**
	POTW Discharge	6.1.A	**0**
Waste	**Non-Recycled**	8.1d	**0**
	Recycled	8.5	**0**
Total Releases			2479

2. Chromium Compounds: Chromium compounds are used in the Facility as a metal alloying agent, and as a metal treatment chemical (conversion coating) used prior to metal painting. The TRI Reporting threshold for chromium compounds is 25,000 # (processed). The Plant processed 628,395,110#'s of aluminum with an average concentration of 0.097% for a processed weight of 609,500 #'s. Chromium is released to the environment from the Plant though air emissions, storm water and POTW discharges. Chromium compounds are recycled through the aluminum skim and dross metal recovery processes. Finally, chromium compounds are disposed of in RCRA and non-RCRA treatment storage and disposal facilities (TSDF's).

Post Inspection Attachment-11

Year 2007 Chromium TRI Summary
Results in #'s

Total Cr Processed 609500

		Element #	2007
Air	**Fugitive - Non-Point**	5.1	**1**
	Stack - Point	5.2	**19**
	Treated on -site	8.6	**0**
Water	**Stream Discharge**	5.31.	**5**
	POTW Discharge	6.1.A	**2**
Waste	**Non-Recycled**	8.1d	**951**
	Recycled	8.5	**8261**
Total			9239

3. Copper: Copper is used by Alcoa as an alloying agent in aluminum sheet and plate production. The TRI reporting threshold for Copper is 25,000 # (processed). The Plant processed 628,395,110#'s of aluminum with an average concentration of 0.266% for a processed weight of 1,671,500#'s. Copper is released to the environment from the Plant though air emissions, storm water and POTW discharges. Copper is recycled off-site through the aluminum skim and dross metal recovery processes. Finally, chromium compounds are disposed of in RCRA and non-RCRA TSDF's.

Year 2007 Copper TRI Summary
Results in #'s

Total Cu Processed 1,671,500

			2007
Air	**Fugitive - Non-Point**	5.1	**1**
	Stack - Point	5.2	**77**
	Treated on -site	8.6	**0**
Water	**Stream Discharge**	5.31.	**24**
	POTW Discharge	6.1.A	**5**
Waste	**Non-Recycled**	8.1d	**66**
	Recycled	8.5	**22517**
Total			22689

4. Dioxin and Dioxin-like compounds: Dioxin and dioxin like compounds are manufactured on site as a byproduct of the aluminum melting process. The threshold determination for dioxin and dioxin-like compounds is 0.1 gram. The Plant releases dioxin and dioxin like compounds compounds to the environment through air emissions. Off site transfers consist of waste materials that contain

dioxins (baghouse dust) is disposed of at RCRA and non-RCRA TSDF's. Emissions factors for these waste are used in the calculating these values.

Year 2007 Dioxin and Dioxin like Compounds
TRI Summary
Results in Grams

			2007
Air	**Fugitive - Non-Point**	5.1	**0**
	Stack - Point	5.2	**33**
	Treated on -site	8.6	**0**
Water	**Stream Discharge**	5.31.	**0**
	POTW Discharge	6.1.A	**0**
Waste	**Non-Recycled**	8.1d	**221**
	Recycled	8.5	**0**
Total			254

5. Ethylbenzene: Ethylbenzene is a compound found in many of the coatings applied to aluminum sheet products that aids in paint functionality. The reporting threshold for this "otherwise used" is 10,000 #'s. The Plant otherwise used 15,350 #'s of Ethylbenzene during calendar year 2007. Ethylbenzene is released to the environment from the Plant through air emissions. Off site transfers consist of waste coating materials that contain ethyl benzene disposed of at RCRA TSDF's. Year 2007 is the only year that Ethylbenzene was sent off-site to a solvent recycler as reflected in 8.5.

Year 2007 Ethylbenzene TRI Summary
Results in #'s

Total Ethylbenzene used **15350**

			2007
Air	**Fugitive - Non-Point**	5.1	**0**
	Stack - Point	5.2	**12**
	Treated on -site	8.6	**11500**
Water	**Stream Discharge**	5.31.	**0**
	POTW Discharge	6.1.A	**0**
Waste	**Non-Recycled**	8.1d	
	Recycled	8.5	
Total			15047

6. Hydrochloric Acid: Hydrochloric Acid is manufactured at Alcoa Lancaster as a byproduct of the aluminum melting process. The reporting threshold for HCl is 25,000 #'s per year. The Plant "manufactured" 100,024 #'s of Hydrochloric acid during 2007. Hydrochloric acid is released from the facility via air emissions from aluminum processing Units.

Year 2007 Hydrochloric Acid TRI Summary
Results in #'s

			2007
Air	**Fugitive - Non-Point**	5.1	**1**
	Stack - Point	5.2	
	Treated on -site	8.6	
Water	**Stream Discharge**	5.31.	**0.0**
	POTW Discharge	6.1.A	**0.0**
Waste	**Non-Recycled**	8.1d	**0.0**
	Recycled	8.5	**0.0**
Total			91,511

7. Lead: Lead is present in very small amounts in the scrap aluminum melted and c fabricated into plate and coiled sheet. Lead is processed and is present in Alcoa aluminum alloys as an impurity. The reporting threshold is 100#'s per year. Analysis of the Lead present in Sheet and Plate alloys indicates that the Plant processed 8,262 #'s of Lead in 2007. Lead is released to the environment from the Plant though air emissions, storm water and POTW discharges. Lead is recycled off-site through the aluminum skim and dross metal recovery processes. Finally, Lead is disposed of in RCRA and non-RCRA TSDF's.

Year 2007 Lead TRI Summary
Results in #'s

Total Pb Processed 8,262

			2007
Air	**Fugitive - Non-Point**	5.1	**1**
	Stack - Point	5.2	**18**
	Treated on -site	8.6	**0**
Water	**Stream Discharge**	5.31.	**9**
	POTW Discharge	6.1.A	**1**
Waste	**Non-Recycled**	8.1d	**47**
	Recycled	8.5	**135**
Total			211

8. Manganese: Manganese is used by Alcoa as an alloying agent in aluminum sheet and plate production. The threshold determination for Manganese is 25,000 # (processed). The Plant processed 628,395,110 #'s of aluminum with an average concentration of 0.556% for a processed weight of 3,492,322 #'s. Manganese is released to the environment from the Plant though air emissions, storm water and POTW discharges. Manganese is recycled off-site through the

aluminum skim and dross metal recovery processes. Finally, Manganese is disposed of in RCRA and non-RCRA TSDF's.

Year 2007 Manganese TRI Summary
Results in #'s

Total Mn Processed **3492322**

			2007
Air	**Fugitive - Non-Point**	5.1	**1**
	Stack - Point	5.2	**421**
	Treated on -site	8.6	**0**
Water	**Stream Discharge**	5.31.	**61**
	POTW Discharge	6.1.A	**5**
Waste	**Non-Recycled**	8.1d	**305**
	Recycled	8.5	**44,497**
Total			45,288

1. Naphthalene: Naphthalene is a compound found in many of the coatings applied to aluminum sheet products that aids in paint functionality. The reporting threshold for this "otherwise used" chemical is 10,000 #'s. The Plant otherwise used 12,900 #'s of Naphthalene during calendar year 2007. Naphthalene is released to the environment from the Plant through air emissions. Off site transfers consist of waste coating materials that contain Naphthalene disposed of at RCRA TSDF's. Year 2007 is the only year that Napthalene was sent off-site to a solvent recyler as reflected in 8.5.

Year 2007 Naphthalene TRI Summary
Results in #'s

Naphthalene used **12900**

			2007
Air	**Fugitive - Non-Point**	5.1	**0**
	Stack - Point	5.2	**10**
	Treated on -site	8.6	**10340**
Water	**Stream Discharge**	5.31.	**0**
	POTW Discharge	6.1.A	**0**
Waste	**Non-Recycled**	8.1d	**1310**
	Recycled	8.5	**1250**
Total			12910

9. N-Butyl Alcohol: N-Butyl Alcohol is a compound found in many of the coatings applied to aluminum sheet products that aids in paint functionality. The reporting

threshold for this "otherwise used" chemical is 10,000 #'s. The Plant otherwise used 48,445 #'s of N-Butyl Alcohol during calendar year 2007. N-Butyl Alcohol is released to the environment from the Plant through air emissions. Off site transfers consist of waste coating materials that contain N-Butyl Alcohol disposed of at RCRA TSDF's. Year 2007 is the only year that N-Butyl Alcohol as sent off-site to a solvent recycler as reflected in 8.5.

Year 2007 N-Butyl Alcohol TRI Summary
Results in #'s

N-Butyl Alcohol Used **48445**

			2007
Air	**Fugitive - Non-Point**	5.1	**0**
	Stack - Point	5.2	**36**
	Treated on-site	8.6	**36240**
Water	**Stream Discharge**	5.31.	**0**
	POTW Discharge	6.1.A	**0**
Waste	**Non-Recycled**	8.1d	**6250**
	Recycled	8.5	**5920**
Total			48446

11. Toluene: Toluene is a compound found in many of the coatings applied to aluminum sheet products that aids in paint functionality. The reporting threshold for this "otherwise used" chemical is 10,000 #'s. The Plant otherwise used 11,633 #'s of Toluene during calendar year 2007. Toluene is released to the environment from the Plant through air emissions. Off site transfers consist of waste coating materials that contain Toluene disposed of at RCRA TSDF's. Year 2007 is the only year that Toluene was sent off-site to a solvent recycler as reflected in 8.5

Year 2007 Toluene TRI Summary
Results in #'s

Toluene used **11633**

			2007
Air	**Fugitive - Non-Point**	5.1	**0**
	Stack - Point	5.2	**9**
	Treated on -site	8.6	**8890**
Water	**Stream Discharge**	5.31.	**0**
	POTW Discharge	6.1.A	**0**
Waste	**Non-Recycled**	8.1d	
	Recycled	8.5	
Total			11629

12. 1, 2, 4, Trimethylbenzene: 1, 2, 4 Trimethylbenzene is a compound found in many of the coatings applied to aluminum sheet products that aids in paints functionality. The compound is also found in a general solvent (mineral spirits) used in the facility, Kensol 30. The reporting threshold for this "otherwise used" chemical is 10,000 #'s. The Plant otherwise used 52,195 #'s of Toluene during calendar year 2007. 1, 2, 4 Trimethylbenzene is released to the environment from the Plant through fugitive and stack air emissions at the Plant's coating line and #11 Slitter. Off site transfers consist of waste coating materials that contain 1, 2, 4 Trimethylbenzene disposed of at RCRA TSDF's. Year 2007 is the only year that 1, 2, 4 Trimethylbenzene was sent off-site to a solvent recycler as reflected in 8.5

Year 2007 1, 2, 4 Trimethylbenzene TRI Summary
Results in #'s

1,2,4 Trimethlybenzene used **52195**

			2007
Air	**Fugitive - Non-Point**	5.1	**652**
	Stack - Point	5.2	**688**
	Treated on -site	8.6	**35760**
Water	**Stream Discharge**	5.31.	**0**
	POTW Discharge	6.1.A	**0**
Waste	**Non-Recycled**	8.1d	
	Recycled	8.5	
Total			52199

13. Xylene (Mixed Isomers): Xylene is a compound found in many of the coatings applied to aluminum sheet products that aids in paint functionality. The reporting threshold for this "otherwise used" chemical is 10,000 #'s. The Plant otherwise used 72,719 #'s of Xylene during calendar year 2007. Xylene is released to the environment from the Plant through air emissions. Off site transfers consist of waste coating materials that contain Xylene disposed of at RCRA TSDF's. Year 2007 is the only year that Xylene was sent off-site to a recycler as reflected in 8.5.

Year 2007 Xylene TRI Summary
Results in #'s

Xylene used **72719**

			2007
Air	**Fugitive - Non-Point**	5.1	**0**
	Stack - Point	5.2	**56**
	Treated on -site	8.6	**56220**
Water	**Stream Discharge**	5.31.	**0**
	POTW Discharge	6.1.A	**0**
Waste	**Non-Recycled**	8.1d	
	Recycled	8.5	
Total			72716

Exhibit III

Alcoa Lancaster Calculation of Off Site Recycling (Section 8.5) for TRI Metals 2004-2005
Showing Change in Methodology

Pre-2005 Section 8.5 Metals calculations

Plate	1,280,980	185	237	8.67	1,976	1,120	1,436	15	19	
Sheet	11,514,585	185	2,133	8.67	17,761	1,120	12,912	15	173	
Sheet	1,197,815	565	678	8.67	5,643	450	540	148	177	
	13,993,380		**3,048**		**25,379**		**14,888**		**370**	Section 8.5 Off Site Treated Year 2004 Report

EXHIBIT III

Alcoa Lancaster Calculation of Off Site Recycling (Section 8.5) for TRI Metals 2004-2005
Showing Change in Methodology

2005 to Date Section 8.5 Metals calculation

Scepter-Bicknell	3762380	2200992	0.19	4188	0.585	12873	0.086	1903	0.001	27	
Scepter-Sceneca Falls	10353310	6056686		11524		35425		5236		73	
Total	14115690	8257679		**15711**		**48298**		**7138**		**100**	Section 8.5 Off Site Treated Year 2005 Report

Assume:	Al recovered =as a % of dross Shipped	0.585	***

Post Inspection Attachment-12

Recycling the Aluminum Content of Aluminum Dross

In the secondary aluminum production industry, scrap aluminum is melted in gas fired reverberatory or hearth furnaces. Impurities are removed from the molten aluminum using chlorine or other metal fluxes until the aluminum reaches the desired chemistry. This mix of metal impurities, such as silica, hydrogen, calcium etc., which float to the surface of the molten metal, is called Dross.

The mechanical process of removing the Dross layer from the surface of molten metal is inexact, and greatly impacts the aluminum content of the dross. As a result, Dross can have a variable amount of aluminum, anywhere from 10-90%. Alcoa does not have equipment to recover these metal units. Alcoa typically ships its dross to an independent Dross processor. The recycler melts the solidified Dross, removes the impurities from the aluminum, pours the molten aluminum into an ingot mold, and returns the metal units back to Alcoa.

Lancaster calculates the total amount of TRI metals recycled off site by determining the average concentration of TRI chemicals in the metal returned to Alcoa times the total metal recycled (returned).

"Breisinger, Brian G." <Brian.Breisinger@alcoa.com >

03/24/2009 10:08 AM

To Robert Staves/R3/USEPA/US@EPA

cc

bcc

Subject Correction to My Original Response Regarding Importing Lead at Alcoa Lancaster

Rob:

I just wanted to make a correction to Alcoa Lancaster's submittal to you regarding our EPCRA audit.

The question raised was why Lancaster consistently checked the "imported" box when considering the TRI chemical lead every year since PBT chemical s were to be reported. One of our corporate consultants informed me that they originally instructed Lancaster to check that box in the Form R for lead because we import rolling ingot from Canada; and lead is trace impurity in all aluminum alloys we fabricate at Lancaster.

So I stand corrected, and there is no need to amend or update our TRI reports.

If you have any questions or comments, please call me on 717-393-9641 (1549)

Thanks,

Brian

Post Inspection E-mail-Attachment 14

"Breisinger, Brian G." <Brian.Breisinger@alcoa.com>

03/25/2009 02:35 PM

To Robert Staves/R3/USEPA/US@EPA

cc "Morinchin, Steven S" <Steven.Morinchin@alcoa.com>, "Fitzpatrick, Tim P." <Tim.Fitzpatrick@alcoa.com>

bcc

Subject Emissions Factor used to calculate the Lancaster D/F releases

Rob:

I'm just following up on your request for information on dioxin shipped/emissions factors from the 2/19 audit.

Lancaster uses dioxin emissions release factors from Secondary Aluminum MACT stack testing for air emissions, and the Aluminum Association's Guidance for Reporting PBT's from Aluminum Operations under 40 CFR Part 372 for solid waste releases.

Attached is the image of Table 2.8 from this document showing their recommended solid waste release factor of 719.83 ug/Mg of Al Processed. The calculation of the D/F's sent off site in waste is a straight-forward multiplication of the amount of aluminum processed by Lancaster in Mg times the factor, then a conversion to grams.

<<2ndflTechEngCopier@alcoa.com_20090325_135827.pdf>>
I've also included the cover letter from this document below for your reference.

<<2ndflTechEngCopier@alcoa.com_20090325_142226.pdf>>

Please let me know if you need more information.

Thanks,

Brian G. Breisinger
Staff Environmental Engineer
Alcoa Lancaster Operations


2ndflTechEngCopier@alcoa.com_20090325_135827.pdf


2ndflTechEngCopier@alcoa.com_20090325_142226.pdf

Post Inspection Attachment-15

Air Emission and Solid Waste Release Factors:

Dioxin/furan air emission factors (controlled and uncontrolled) and a solid waste release factor were developed for Category IA, IB and IC - Group 1 furnaces. **Tables 2.8, 2.9,** and **2.10** summarize D/F factors for Category I furnaces.

Category II - Group 1 furnaces utilize work practices to control air emissions; therefore, air emission factors were developed based on furnace stack emissions. Emission factors were developed for Category IA and IB furnaces. **Tables 2.11** and **2.12** summarize D/F factors for Category II - Group 1 furnaces.

Category IA

The uncontrolled, controlled and solid waste factors in **Table 2.8** are based on average data from the Wabash furnace test. The total D/F control efficiency for this type of furnace is 96%. Appendix A - **Table A.4** contains detail on emissions factor calculations.

Table 2.8 Category IA - Group 1 Furnaces
D/F Emission and Release Factors

D/F Cogener	Uncontrolled Emission Factor ug/Mg	Controlled Emission Factor ug/Mg	Solid Waste Release Factor ug/Mg
2,3,7,8 - TCDD	2.25	0.25	2.00
1,2,3,7,8 - PeCDD	7.87	0.75	7.12
1,2,3,4,7,8 - HxCDD	7.62	0.53	7.09
1,2,3,6,7,8 - HxCDD	11.50	0.65	10.86
1,2,3,7,8,9 - HxCDD	17.84	1.29	16.55
1,2,3,4,6,7,8 - HpCDD	55.95	2.84	53.10
OCDD	39.81	2.10	37.71
2,3,7,8 - TCDF	38.05	5.50	32.55
1,2,3,7,8 - PeCDF	32.26	1.90	30.37
2,3,4,7,8 - PeCDF	41.43	3.18	38.25
1,2,3,4,7,8 - HxCDF	86.37	4.65	81.72
1,2,3,6,7,8 - HxCDF	94.15	1.48	92.67
2,3,4,6,7,8 - HxCDF	53.84	1.87	51.97
1,2,3,7,8,9 - HxCDF	36.04	0.08	35.96
1,2,3,4,6,7,8 - HpCDF	59.22	2.97	56.26
1,2,3,4,7,8,9 - HpCDF	120.23	0.24	120.00
OCDF	46.72	1.04	45.67
Total D/F	**751.16**	**31.33**	**719.83**

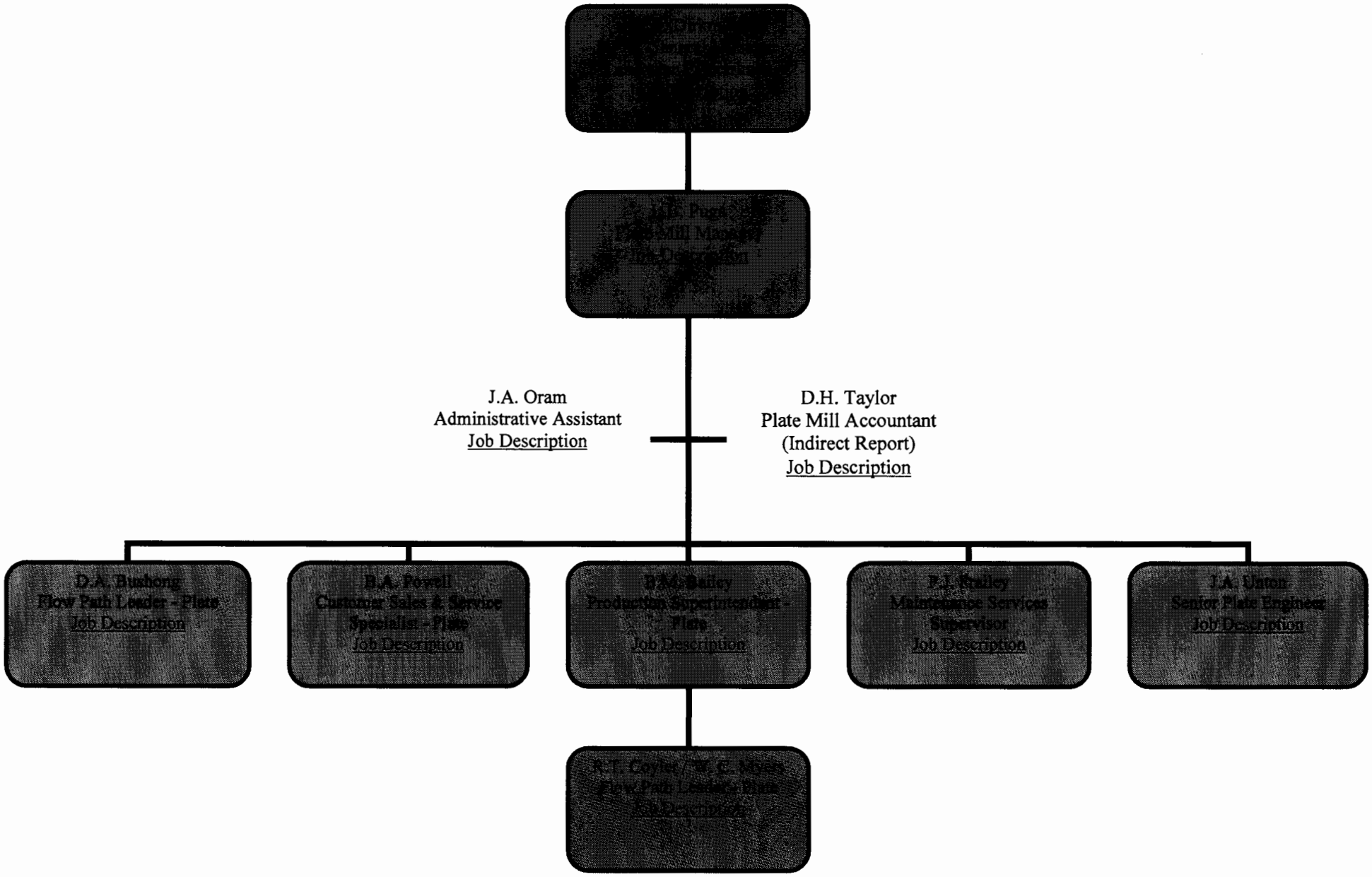
Guidance for Reporting Persistent, Bioaccumulative, Toxic (PBT) Chemicals from Aluminum Operations

Under PBT Release Reporting Requirements 40 CFR Part 372

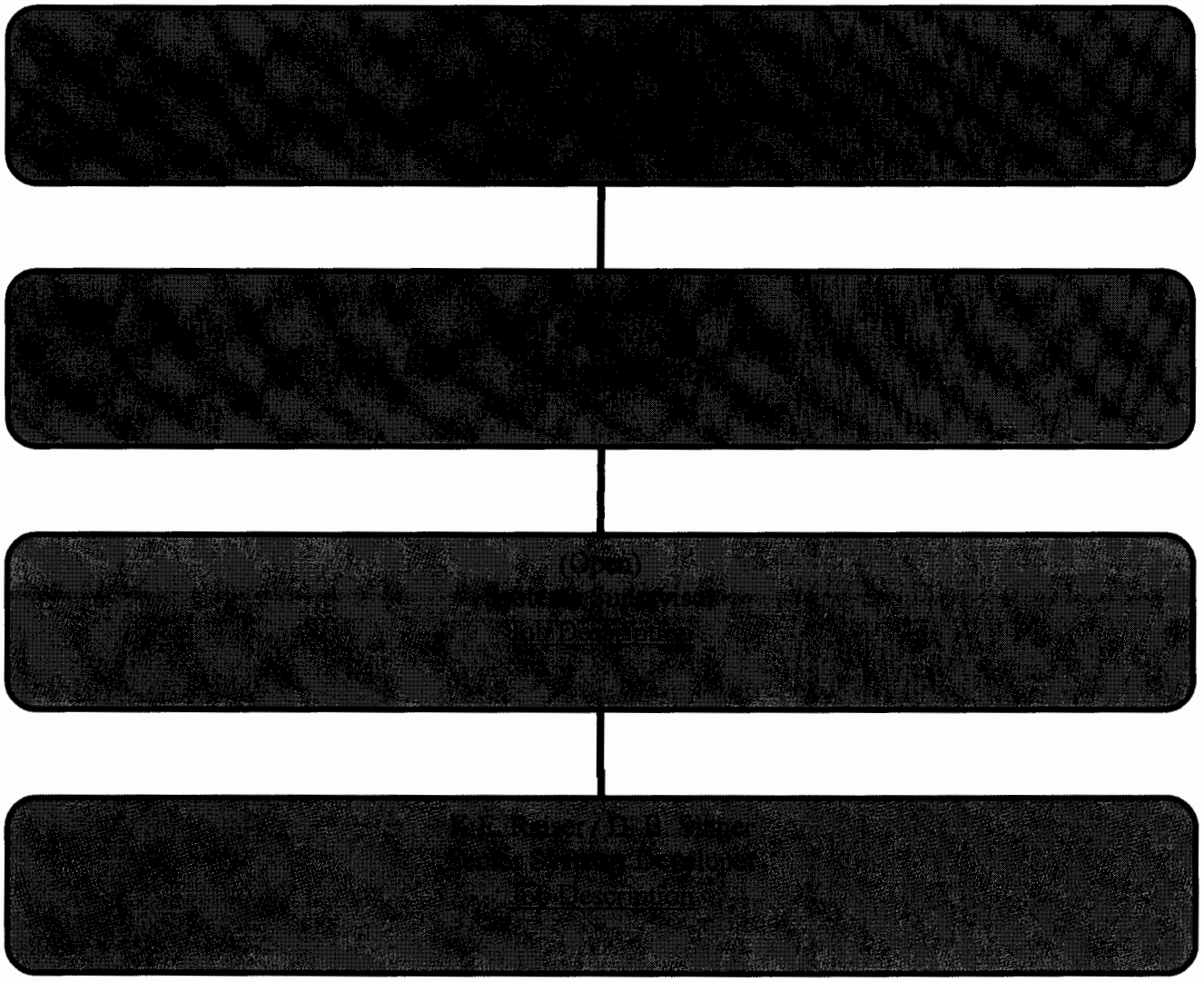
Second Edition
May, 2002

The Aluminum Association
PBT Work Group
900 19th St., NW
Washington, D.C. 20006

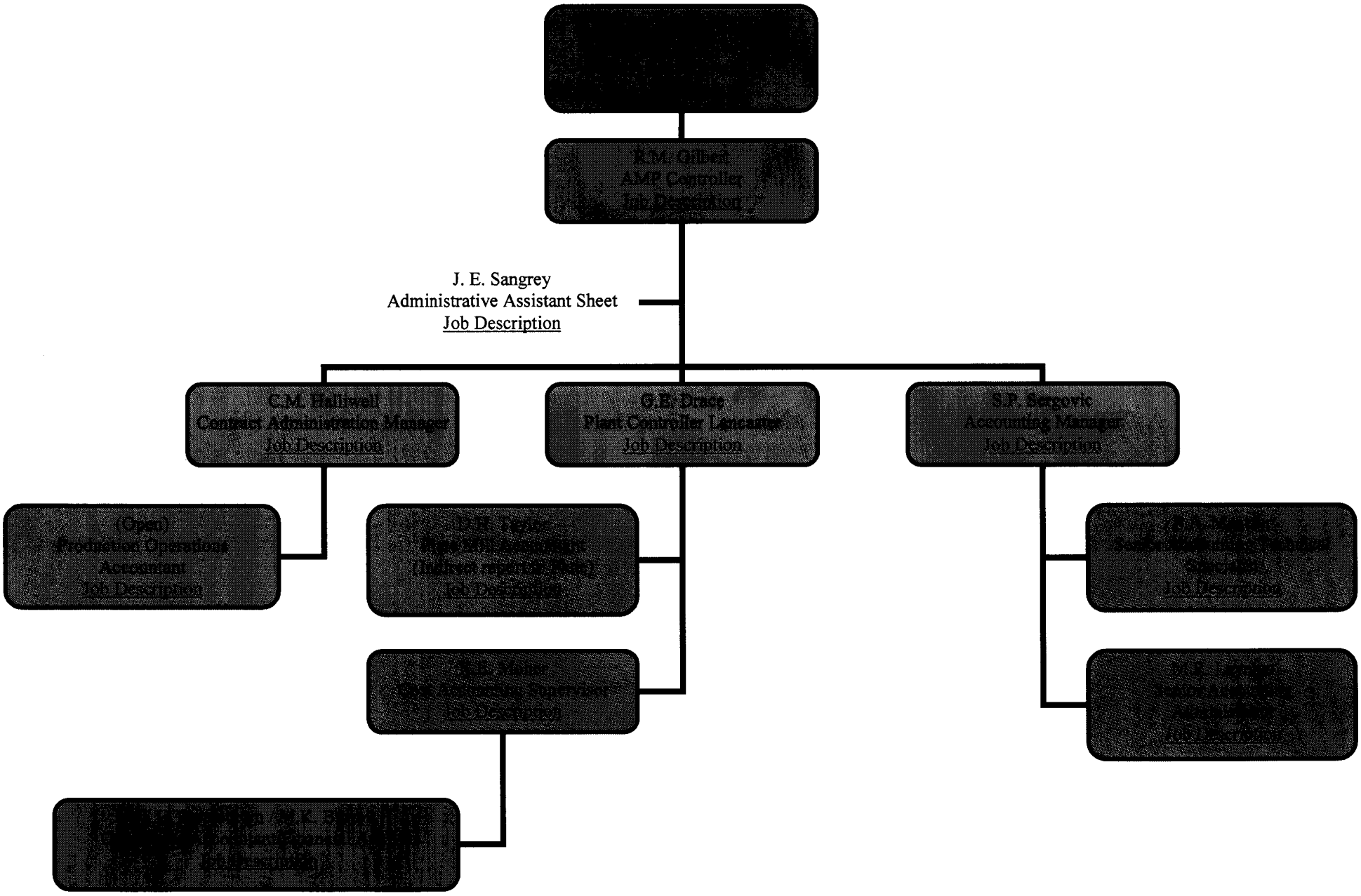
Alcoa Mill Products
Lancaster – Plate



Alcoa Mill Products
Lancaster – Sheet
Information Technology



Alcoa Mill Products
Lancaster – Sheet
Lancaster Accounting



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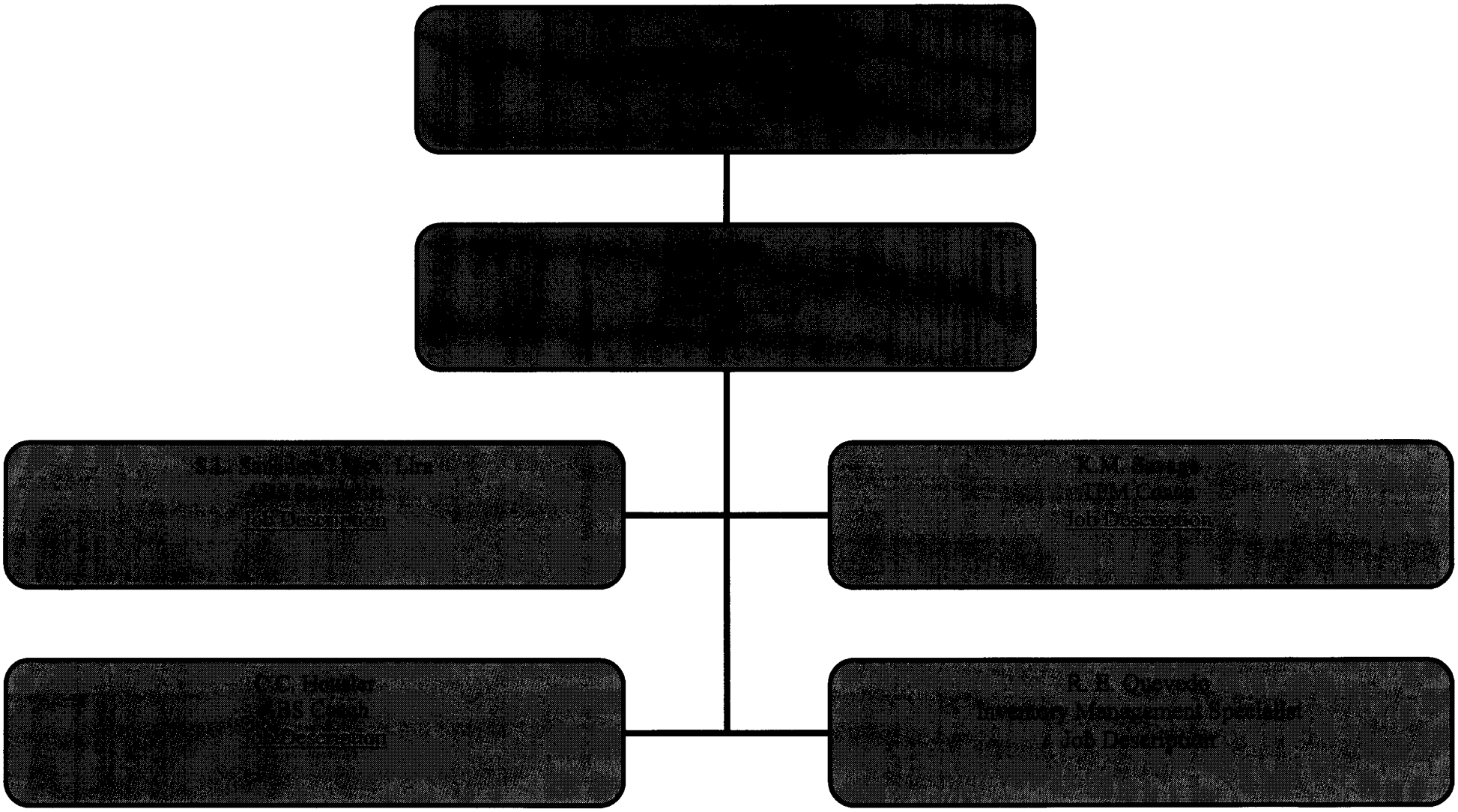
Lancaster – Sheet
Alcoa Business System



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Lancaster – Sheet
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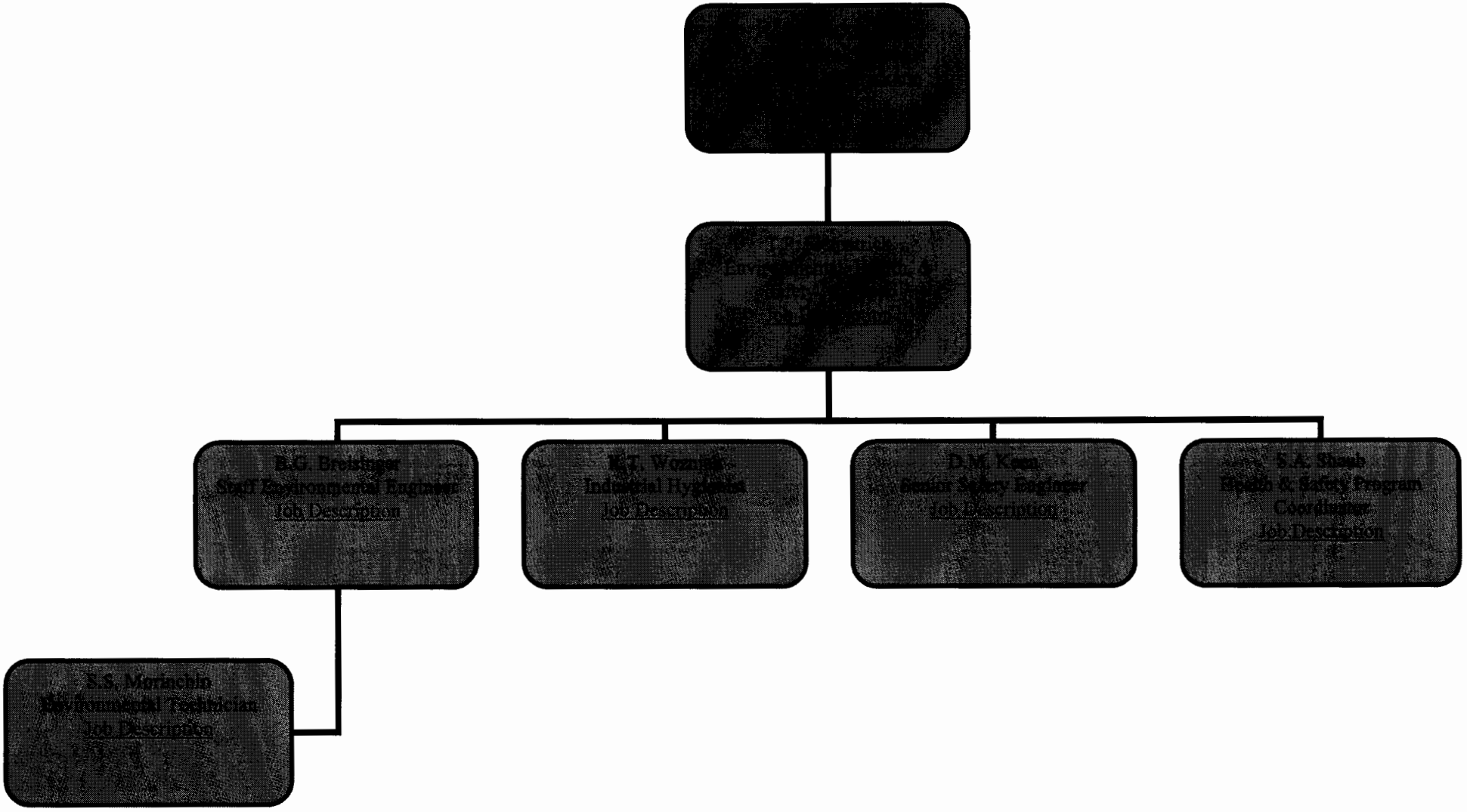

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Lancaster – Sheet
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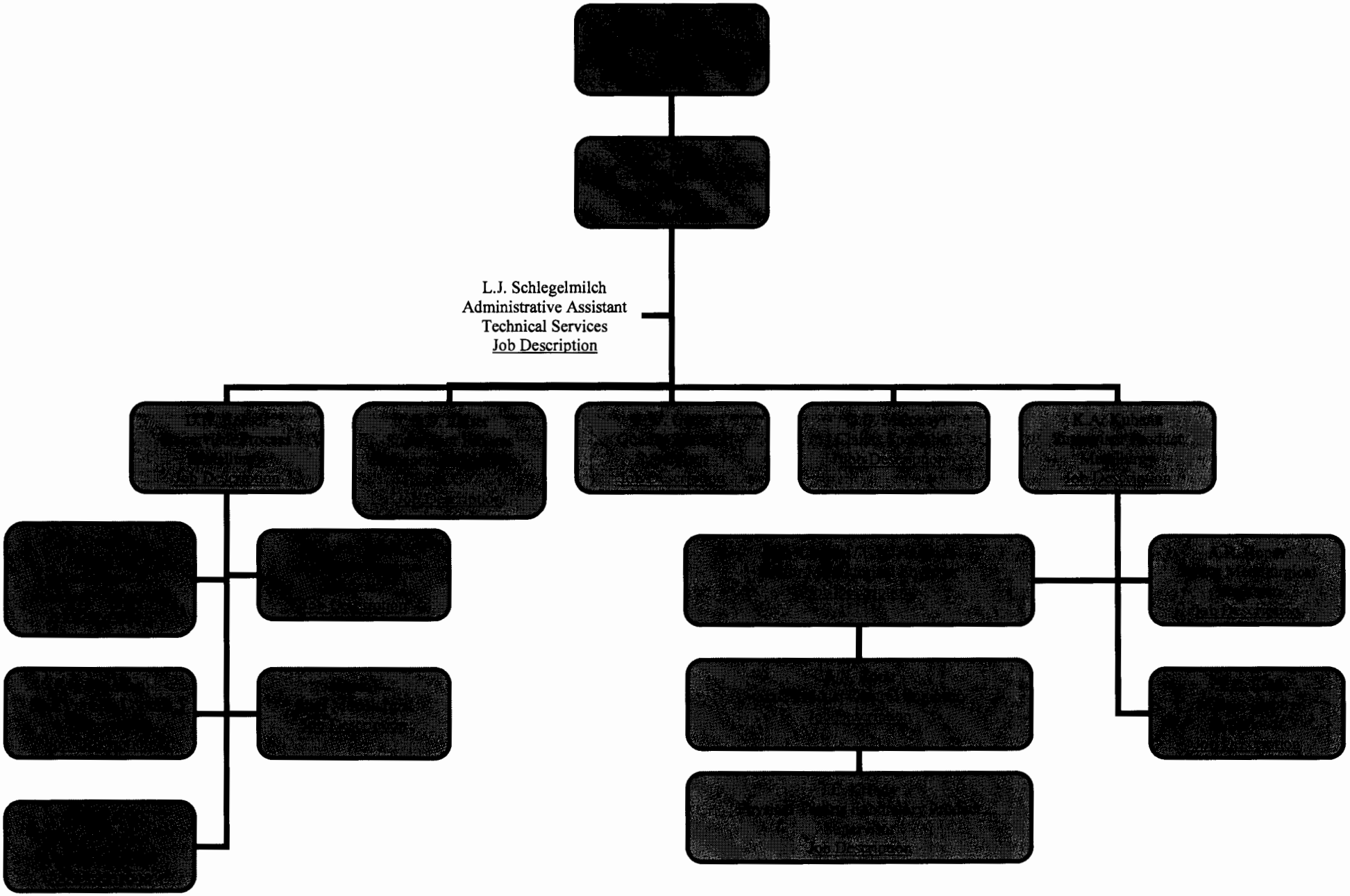
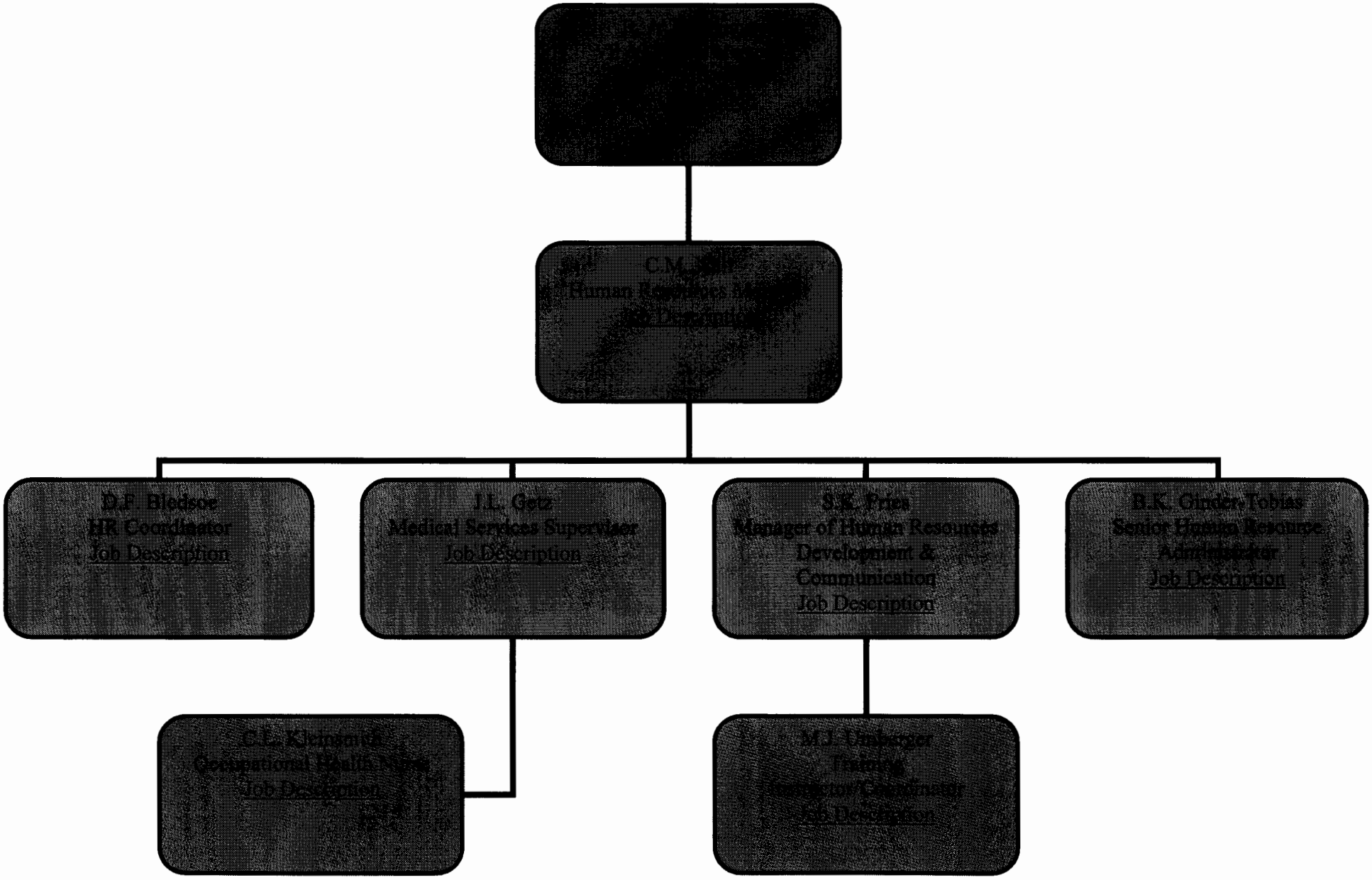
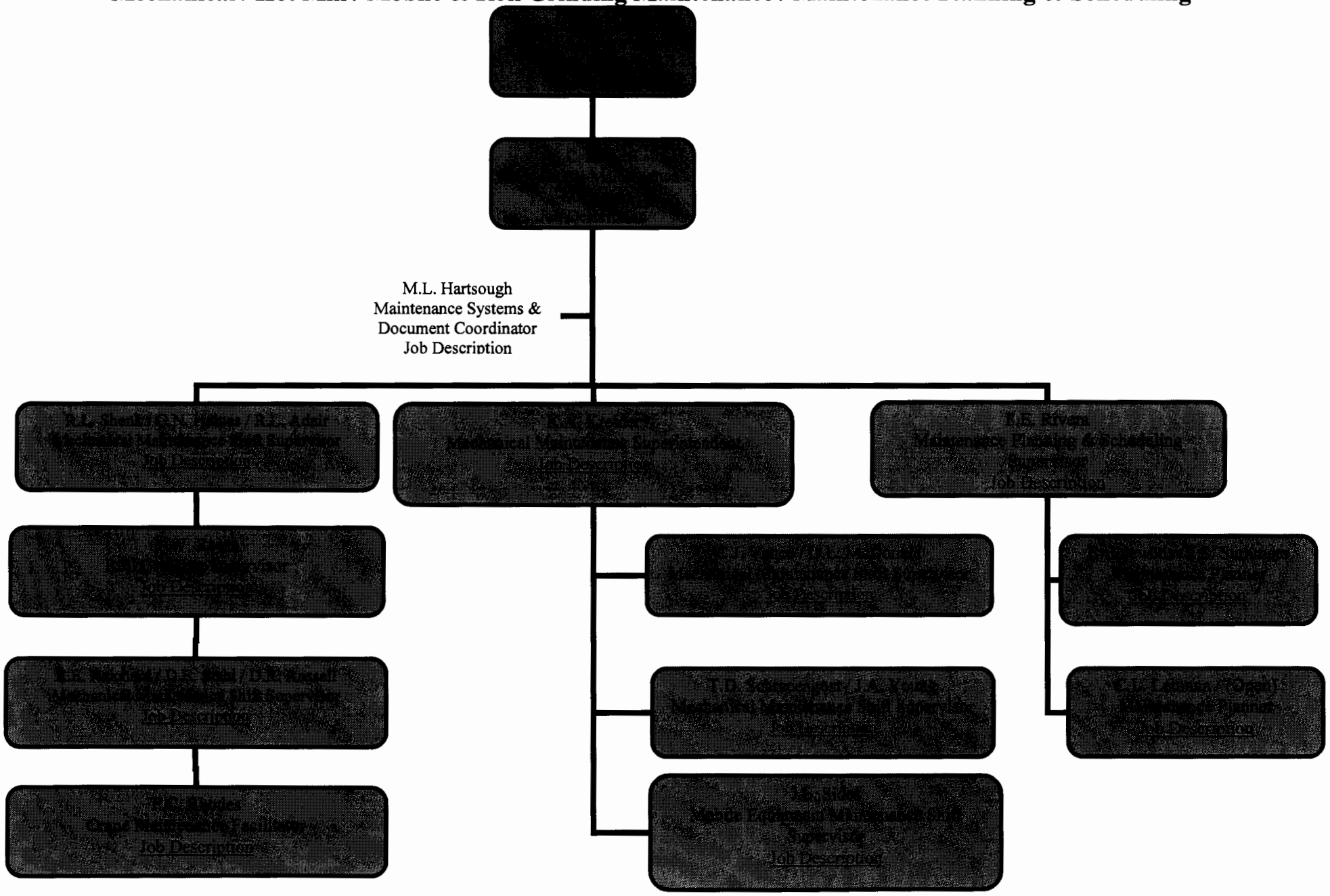


Alcoa Mill Products
Lancaster – Sheet
Human Resources



Alcoa Mill Products
Lancaster – Sheet
Mechanical / Hot Mill / Mobile & Roll Grinding Maintenance / Maintenance Planning & Scheduling



Alcoa Mill Products
Lancaster – Sheet
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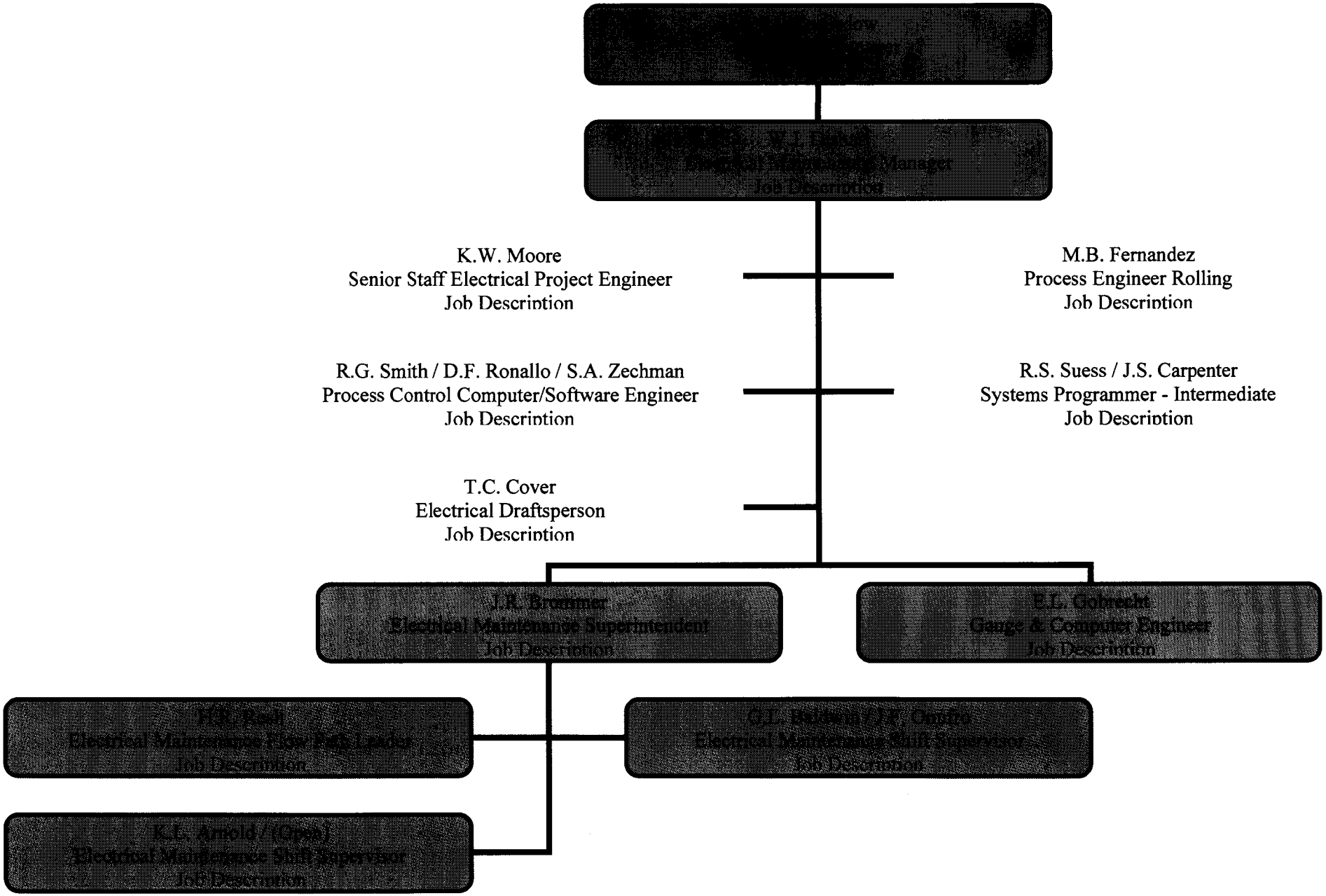
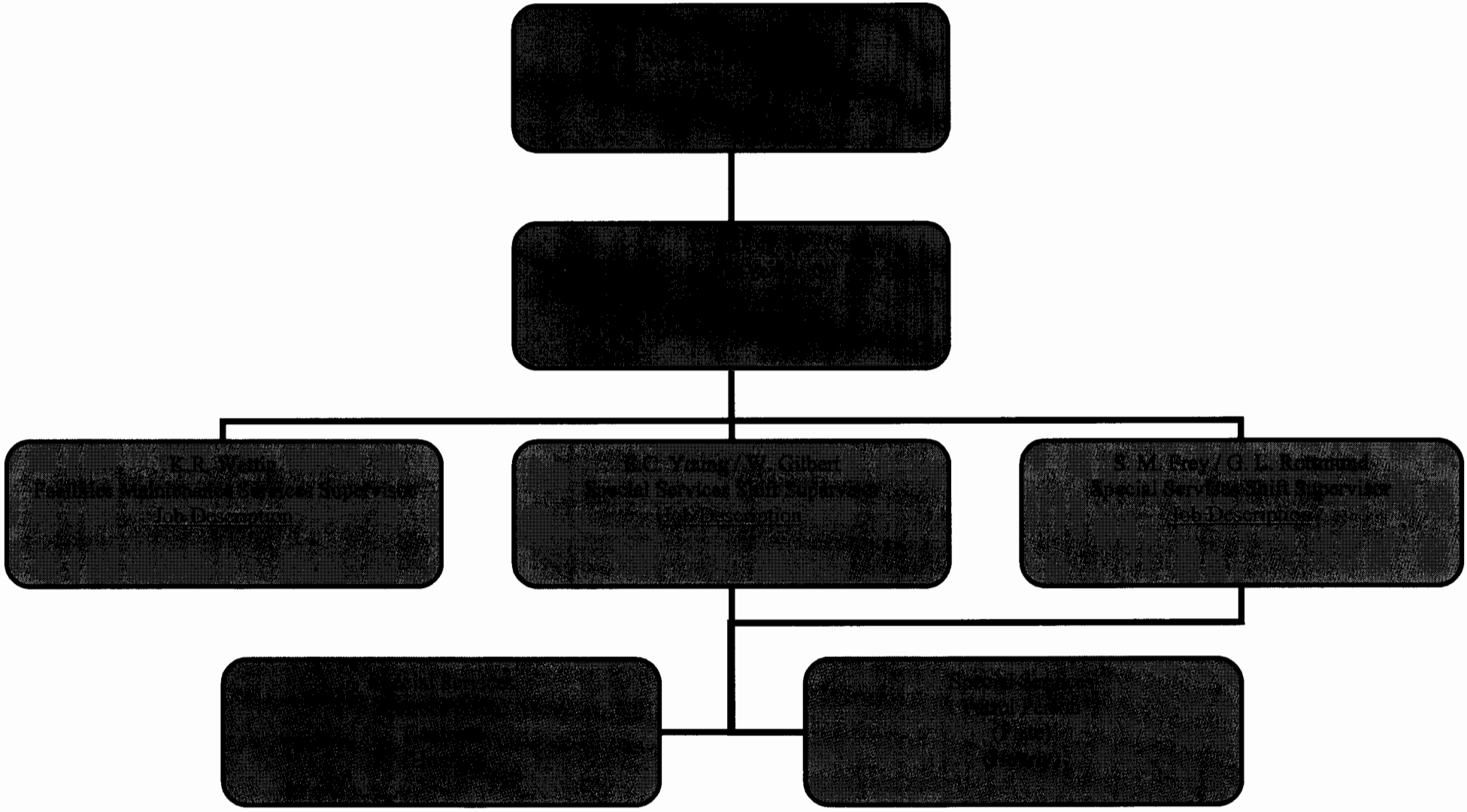
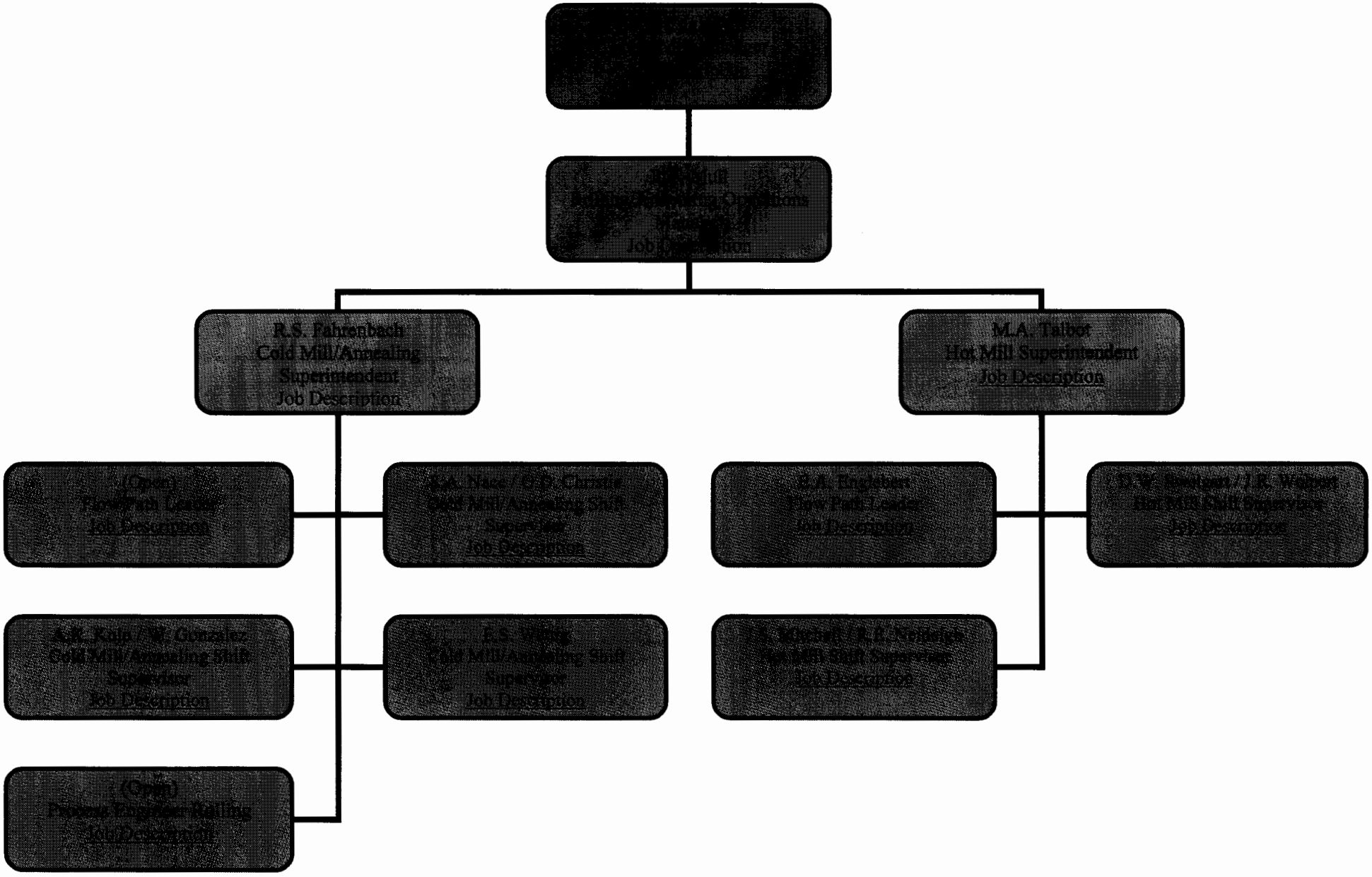


Alcoa Mill Products
Lancaster – Sheet
Facilities Maintenance / Special Services



Alcoa Mill Products
Lancaster – Sheet
Hot Mill / Cold Mill / Annealing



Alcoa Mill Products
Lancaster – Sheet
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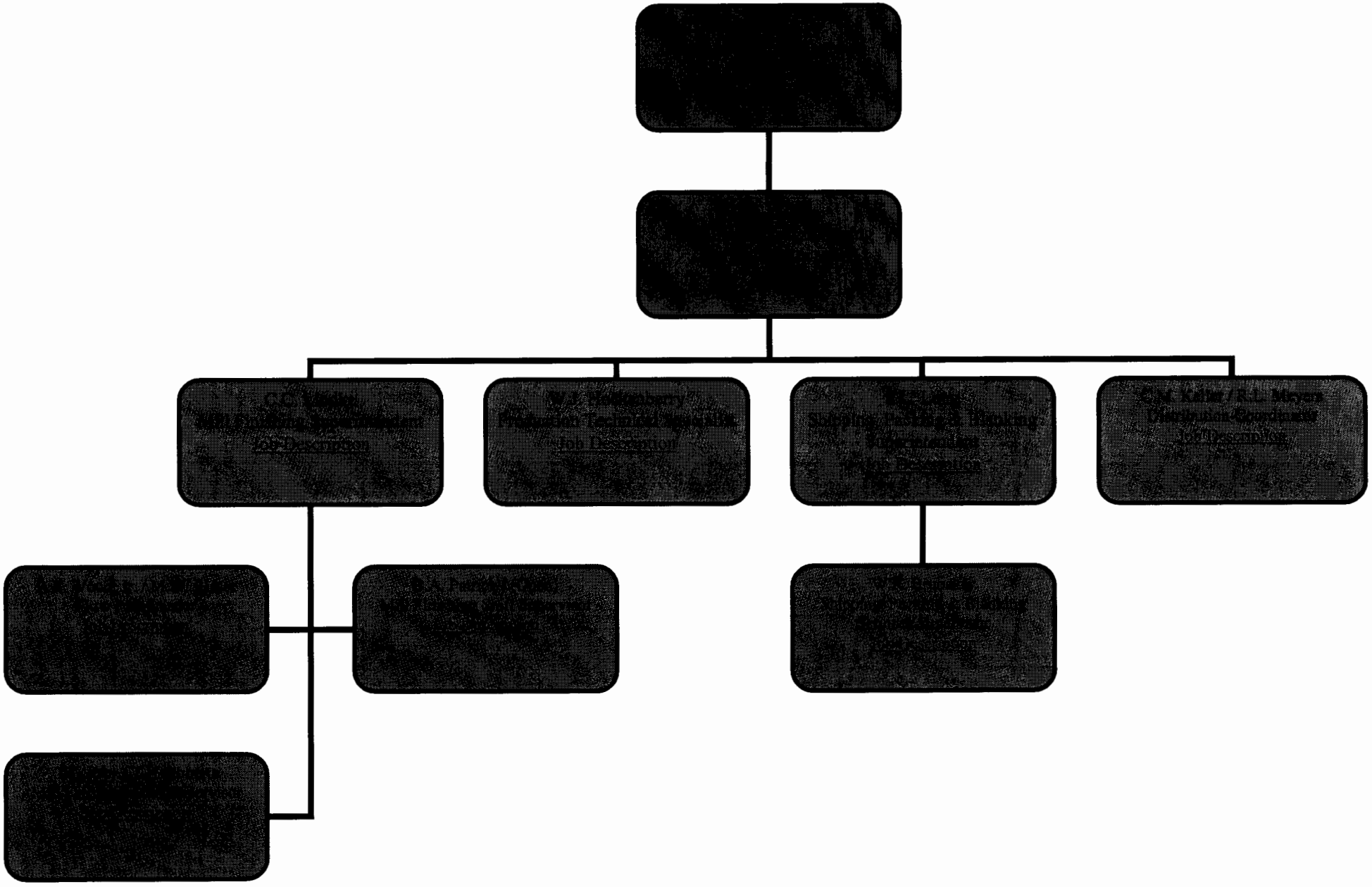

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Lancaster – Sheet
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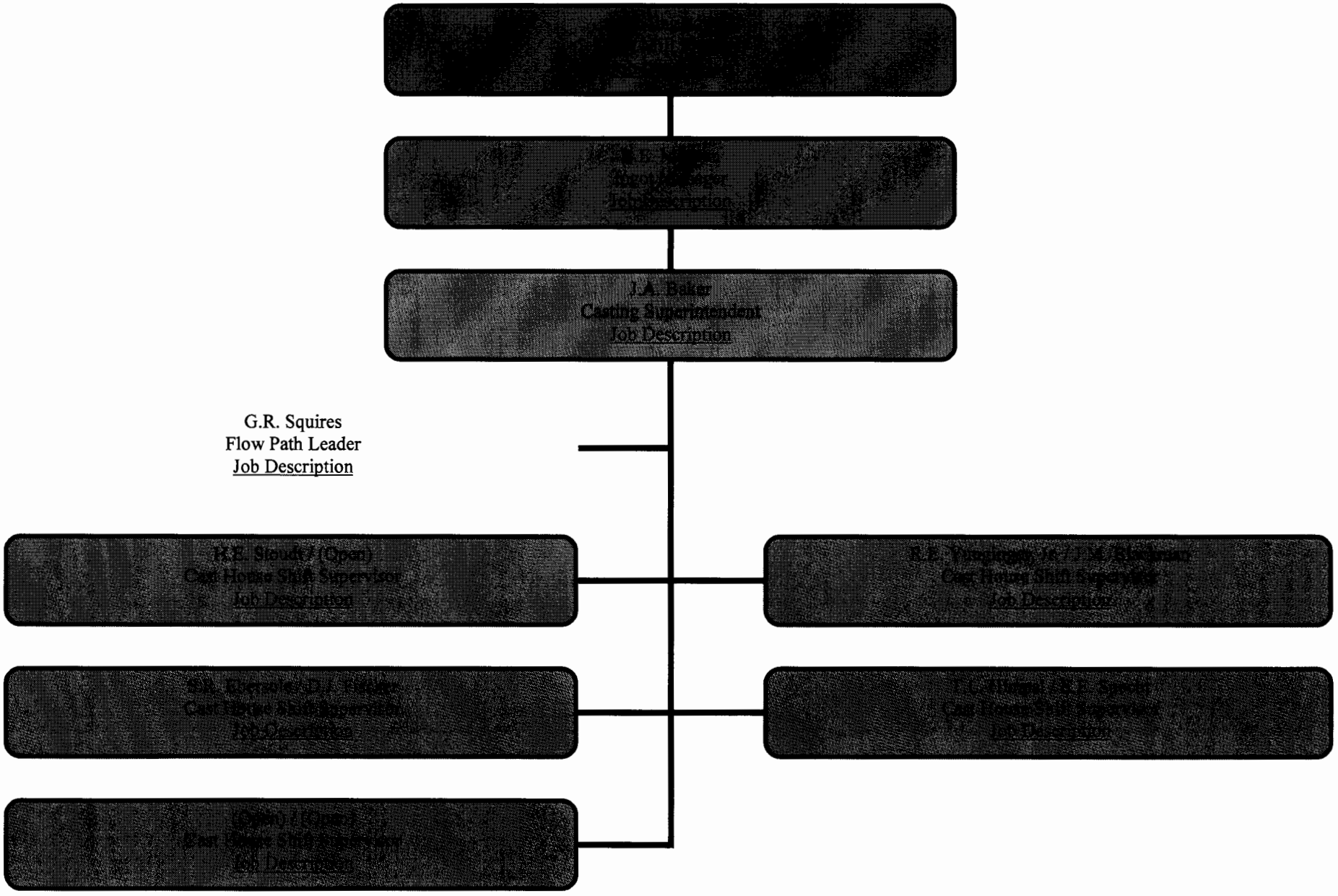

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Lancaster – Sheet
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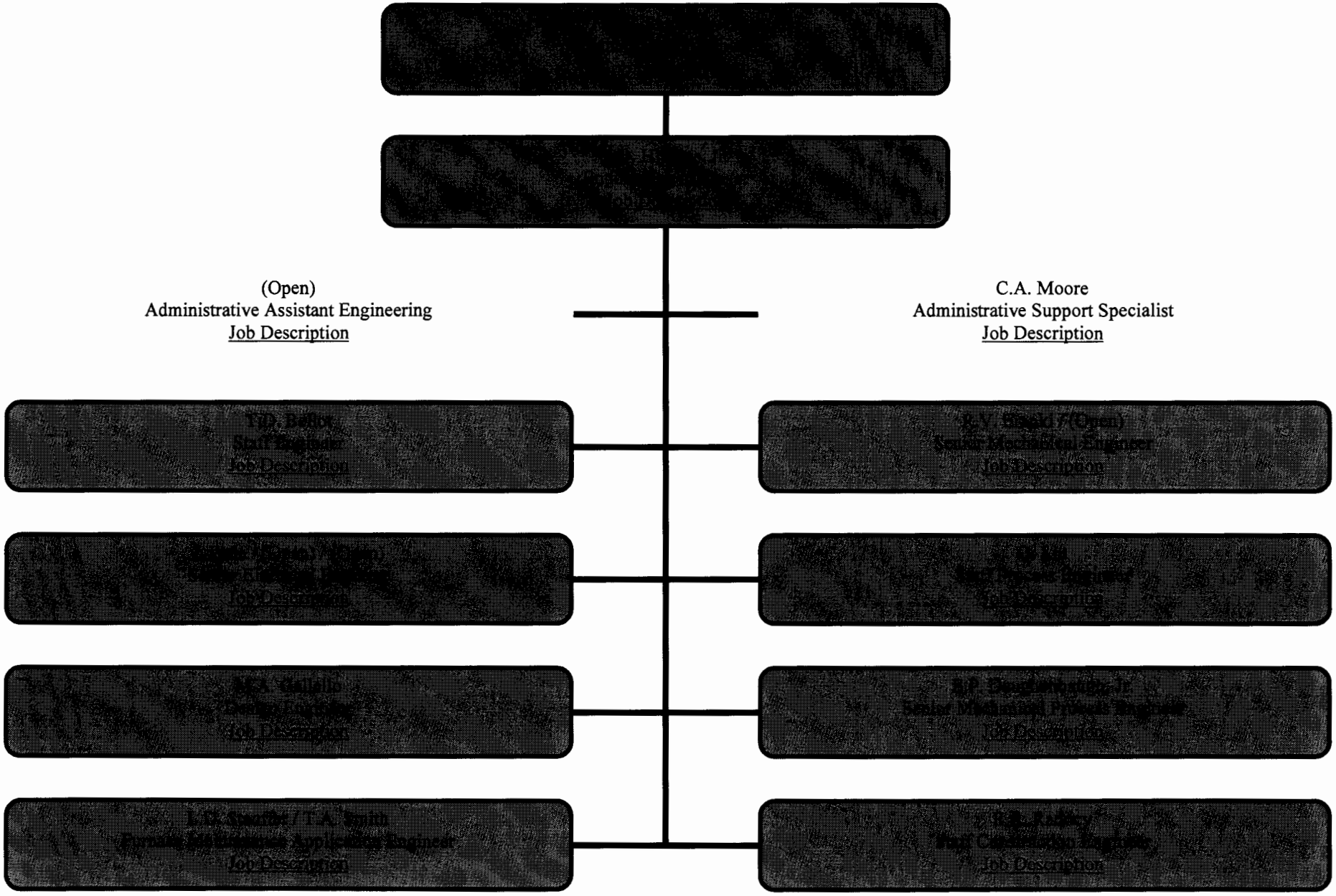

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Lancaster – Sheet
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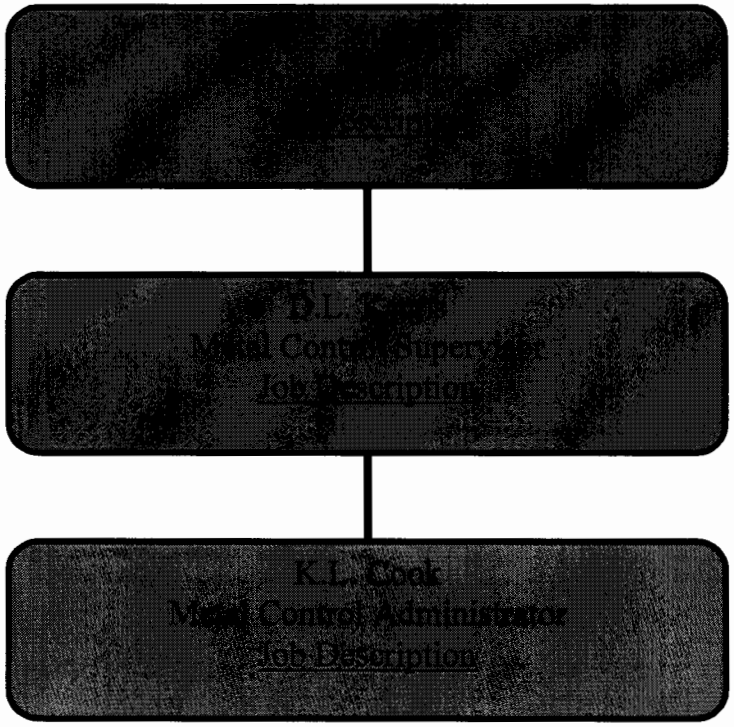

Alcoa Mill Products
Lancaster – Sheet
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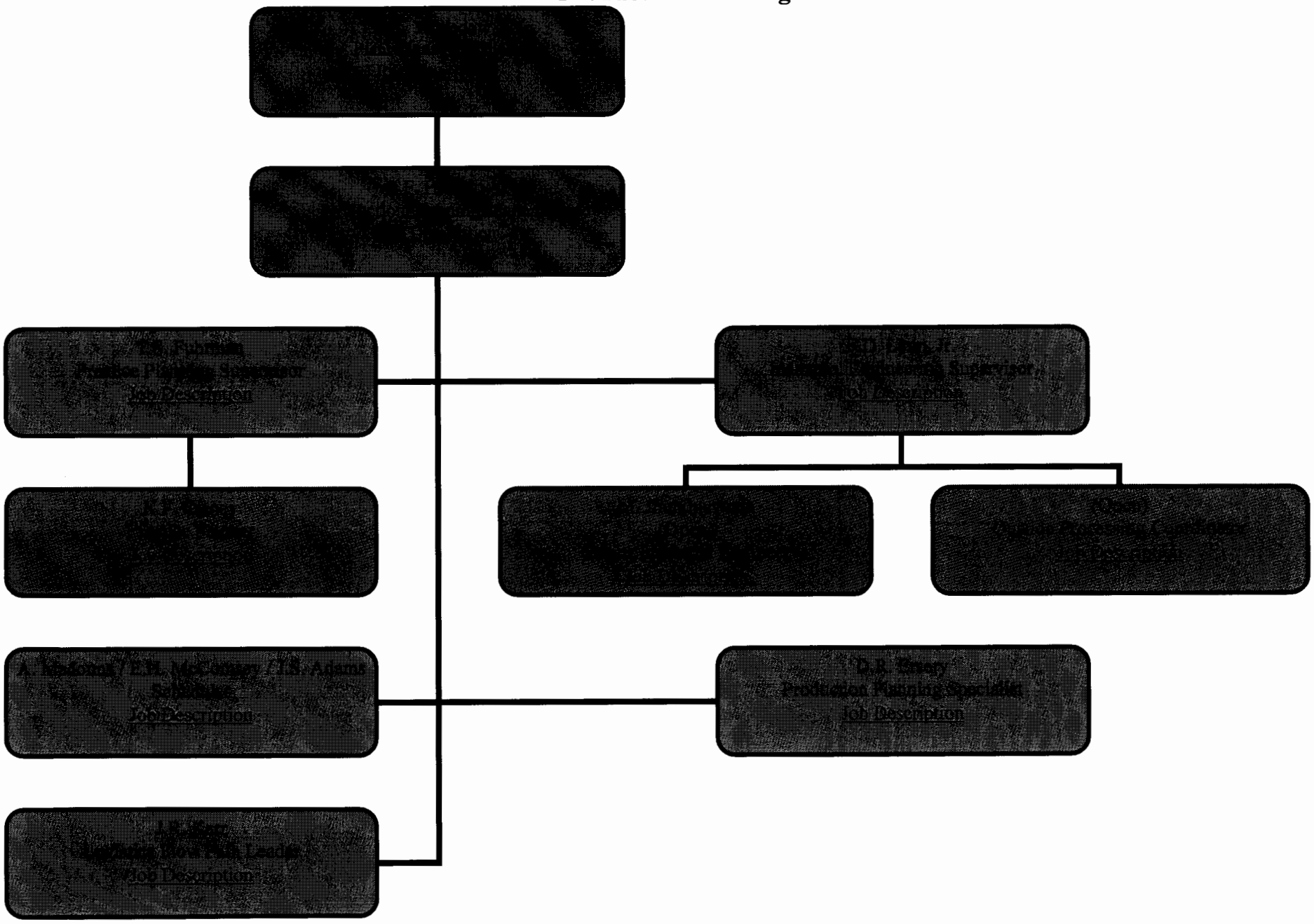
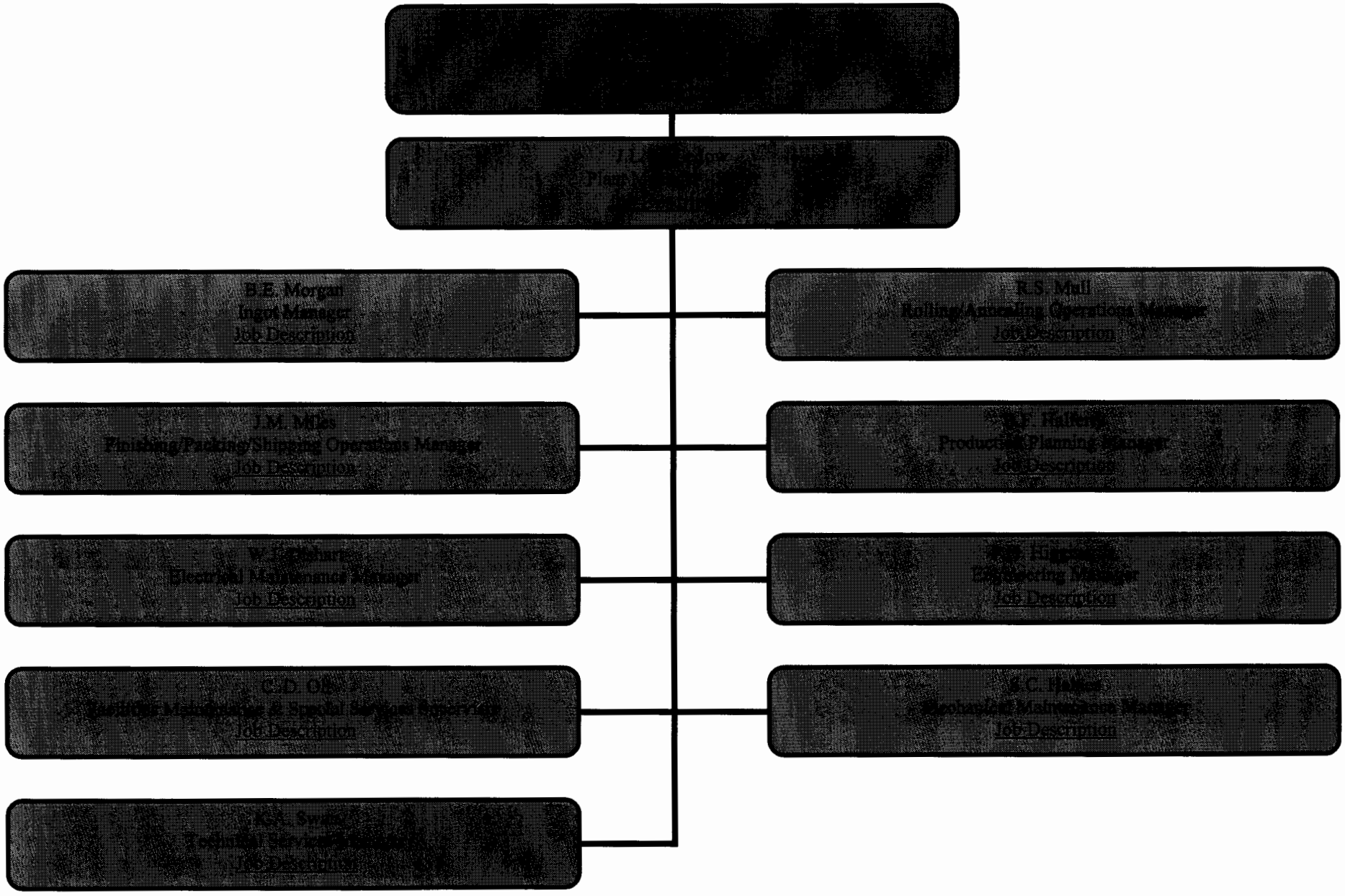


Alcoa Mill Products
Lancaster – Sheet
Manufacturing Staff



Alcoa Mill Products
Lancaster – Sheet
Administrative Staff